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ALEXANDER WILSON'S TRAVELS IN TENNESSEE

Charles P. Nicholson

On 30 January 1810, Alexander Wilson set out on a six month journey to collect and illustrate birds and sell subscriptions to his "American Ornithology." Wilson was 43 years old and had lived in the United States for 16 years. Although he had no formal training in either science or painting, and had been studying birds less than 10 years, Wilson had already published two of the planned ten volumes of "American Ornithology." Wilson traveled alone from Philadelphia west to Pittsburg, down the Ohio River in an open rowboat to Louisville, Kentucky, to New Orleans by foot and horseback, and then to New York by ship. This paper describes the Tennessee portion of his journey. My primary sources have been Hunter's recently published collection of Wilson's letters (1983), and Cantwell's 1961 biography of Wilson. Some information presented in these and other sources is conflicting, such as dates of arrival and departure and length of stay at various places. In these cases, I have relied primarily on Wilson's letters (Hunter 1983). Information on the birds Wilson observed is primarily from "American Ornithology" (Wilson 1811-1812).

Wilson left Lexington, Kentucky on 14 April, bound for Nashville. He had spent several days in Lexington, collecting, sketching, and finding 15 subscribers to "American Ornithology". There Wilson purchased a horse, that he rode to New Orleans. Wilson wrote favorably of Kentucky horses: "The horses of Kentucky are the hardiest in the world, not so much by nature as by education and habit" (Hunter 1983: 344), and attributed much of his safe passage to New Orleans to the strength of his horse. While in Lexington, he observed a slave auction which horrified him. He expressed this outrage in his private journal: "Damned, damned slavery! this is one infernal custom which the Virginians have brought into this country" (Hunter 1983: 372). Wilson again expressed his abolitionist feelings in a letter from Nashville, where at a tavern he observed the landlady flogging her servants. As Wilson proceeded towards Nashville, he passed through the barrens and karst country between the Green River in Kentucky and the Red River in Tennessee, generally following what is now U.S. Highway 31W. He explored a cave in the Mammoth Cave area with its owner, and emerged after 3 hours below ground "with a handkerchief filled with bats, including one which I had never seen described" (Hunter 1983: 350), as well as some blind cave crickets.

Wilson spent 5 days between Bowling Green, Kentucky, and the Tennessee stateline "at the house of a pious and worthy Presbyterian" (Hunter 1983: 351), paying for his lodging by giving drawing lessons to the landlord's daughters. He was impressed with the barrens: "Not withstanding the miserable appearance of the timber on these barrens, the soil, to my astonishment, produced the most luxuriant fields of corn and wheat I had ever before met with. . . .These barrens furnished me with excellent sport in shooting grouse (Greater Prairie Chickens, *Tympanuchus cupido*), which aboud here in great numbers; and in delightful groves that here and there rise majestically from these plains, I found many new subjects for my Ornithology" (Hunter 1983: 350-351). The new subjects included the Kentucky Warbler (*Oporornis formosus*), new to science, and the Prairie Warbler (*Dendroica discolor*). Wilson (1811) also noted that Whip-poor-wills (*Caprimulgus vociferus*) were more numerous on the barrens than elsewhere in the United States, and observed Ruffed Grouse (*Bonasa umbellus*) in wooded groves interspersed throughout the barrens.

After exploring the barrens, Wilson proceeded toward Nashville. His pace was much slower than on the rest of his journey, for the traveling was easy, spring was rapidly developing, and, as Cantwell (1961) notes, Wilson was apprehensive about traveling the Natchez Trace south of Nashville. The exact date Wilson entered Tennessee is unclear, but seems to be 22 or 23 April. Shortly after entering the state (Figure 1), Wilson stopped at the Red River to see a man widely reputed to have committed murder and to have hidden the body in a cave on his property (now known as Cheeks Stand Cave, near the present Robertson/Sumner County line). With another traveler and the reputed murderer, Wilson entered the cave, walking "before with the lights, . . . with my hand on my pistol, reconnoitering on every side" (Hunter 1983: 352). After proceeding a short distance, they stopped and Wilson questioned the reputed murderer about the accusations. The man denied the accusations in a lengthy story, although Wilson was apparently not convinced of the man's innocence. Wilson quickly left the cave and resumed his journey.

Wilson noted that the barrens stopped south of the Red River, where the timber became larger and the topography hilly. A few miles further southwest, "descending an immense declivity" (Hunter 1983:353), Wilson went from the Highland Rim to the Central Basin physiographic region. He camped his first night in Tennessee, and the next morning rode a short distance to Isaac Walton's tavern along Mansker's Creek near the present town of Goodlettsville. He ate breakfast there, and was so taken with Walton that he stayed there 3 days. At nearby Madison's Lick, he observed a flock of Carolina Parakeets (*Conuropsis carolinensis*). These were the only parakeets he observed in the state. In cane thickets near the Cumberland River, he collected the first known Nashville Warbler (*Vermivora ruficapilla*), and noted how much shyer this species was than the Kentucky and Prairie Warblers. He was first attracted to the Nashville Warbler by its calls, and eventually collected three males. While searching lowlands for additional specimens of the Nashville Warbler, he found another new species, the Tennessee Warbler (*V. peregrina*). The type locality for this species, he noted, was "banks of the Cumberland River in Tennessee" (Wilson 1811:83). Other birds in this area were the Hermit Thrush (*Catharus guttatus*) and the Chuck-will's-widow (*Caprimulgus*

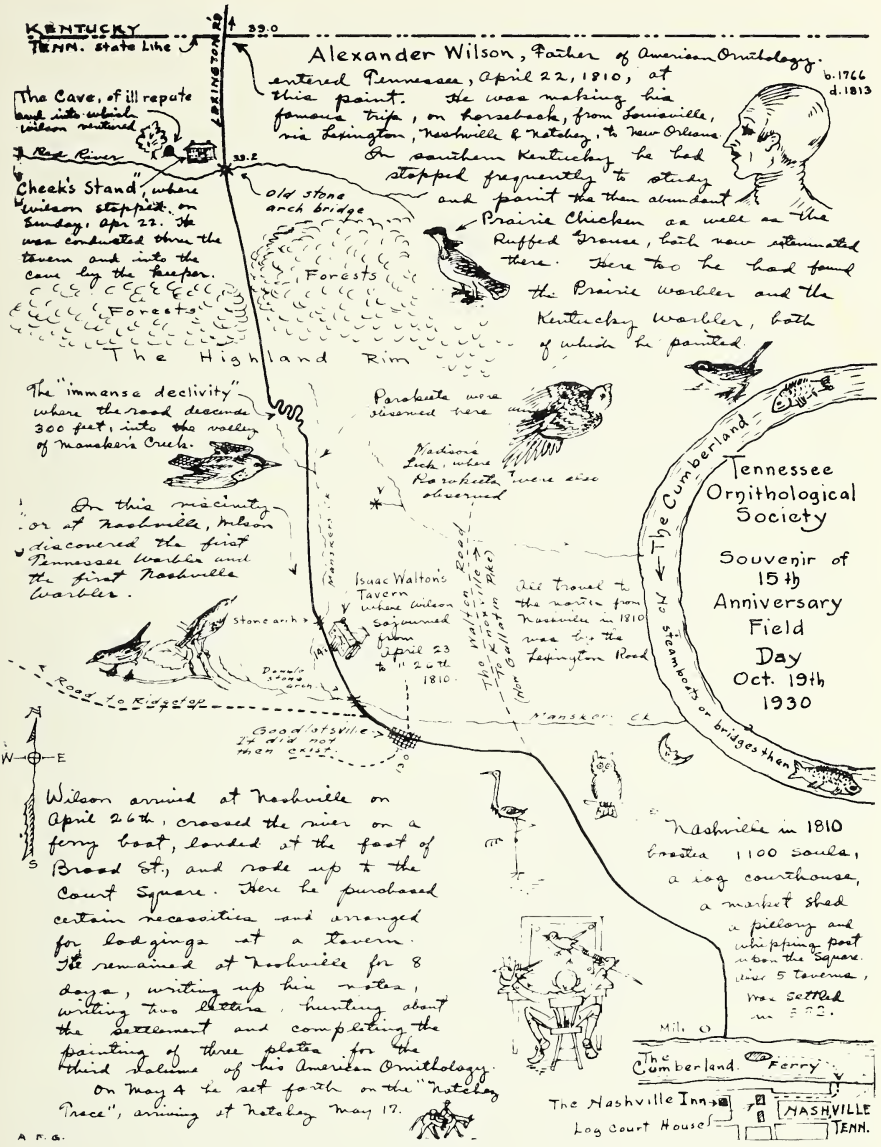

Figure 1. Alexander Wilson's travels from Kentucky to Nashville. Drawn by Albert F. Ganier, reprinted from *The Migrant*, Vol. 1, No. 3-4, 1930.

carolinensis). As he left Walton's for Nashville on 26 April, the innkeeper told him, "You seem to be travelling for the good of the world; and I cannot, and will not charge you anything. Whenever you come this way, call and stay with me, you shall be welcome!" (Hunter 1983:373).

Wilson rode 13 miles to Nashville, ferried across the Cumberland River, and entered the town, which he described as towering like a fortress above the river. He obtained a room at Salter White's tavern, and worked steadily for 8 days, writing and drawing the birds he had recently found. Rain fell much of the time Wilson was in Nashville, and there is no evidence that Wilson did any fieldwork during his stay in Nashville. Before leaving Nashville, he sent the drawings and a letter to Alexander Lawson of Philadelphia, who was doing the engravings for "American Ornithology." The plates never arrived, a serious setback in Wilson's progress on the series.

Ganier (1934) noted the existence of an original edition of the second volume of "American Ornithology" in the Peabody College library in Nashville. This volume, published in January 1810, shortly before Wilson left on his journey, was said to have come from the old University of Nashville, founded in 1785. Ganier speculated that Wilson himself may have left this volume in Nashville. Wilson probably shed any excess baggage before embarking on the Natchez Trace, but I find it unlikely that he would have carried duplicate volumes from Philadelphia. He carried copies on the Trace, as he sold many subscriptions in Natchez and New Orleans. He makes no mention of selling subscriptions in Nashville, and Cantwell (1961) did not include any Tennesseans in his list of subscribers. In any event, we shall probably never know the origin of this volume, as it is not now in the Peabody collection.

The next leg of Wilson's journey was south on the Natchez Trace, more than 450 miles through wilderness and Indian territory. He had considered travelling to St. Louis, and presumably then down the Mississippi River, but because of recent heavy rains, the advanced spring, and the extra distance to St. Louis, Wilson settled on the more direct Trace. He had been forewarned of the dangers of making this trip alone, but believed the reports of hostile Indians and impassable swamps and rivers were exaggerated. Equipped with a loaded pistol in each pocket, a loaded fowling-piece slung from his shoulder, a pound of gunpowder, 5 pounds of shot and a supply of biscuit and dried beef, Wilson left Nashville on the morning of Friday, 4 May. Eleven miles from Nashville, he came to the "Great Harpath" River, which he described as "a stream of about fifty yards wide, which was running with great violence" (Harper 1983:359). Wilson could not find the ford, so he plunged in, and he and his horse swam the river. He soon came to another flooded stream. While crossing it, he became briefly entangled in driftwood. Wilson spent the night in a miner's cabin in what is now southwest Williamson County.

From this area southward, the Natchez Trace was well-defined and followed the ridgetops. Along some stretches, the Trace was a narrow path along the crest of a ridge, with steep slopes on each side. Where the Trace descended a ridge, Wilson often had to dismount and slide down a shale slope, then half-drag his horse up the next ridge. On Saturday, 5 May, Wilson "first observed the cane growing, which increased until the whole woods were full of it" (Harper 1983:360). At the Duck River, he observed American Swallow-tailed Kites (*Elanoides forficatus*) (Wilson 1812). Wilson met several parties of filthy, savage-appearing flatboatmen returning from Natchez and New Orleans. He spent the night at Dobbin's Stand, just south of Big Swan Creek, near what is now Gordonsburg, Hickman County. About a dozen flatboatmen also stayed at Dobbin's Stand, and

they attributed their morning illness to having slept indoors for the first time in 15 nights. Since leaving Nashville, Wilson had covered 70 miles in 2 days.

Wilson rode that morning, Sunday, 6 May, to Grinder's Stand, on the north edge of Indian territory, 6 miles from Dobbin's Stand. This was the same cabin where Meriwether Lewis, of Lewis and Clark expedition fame and the governor of the Louisiana Territory, had died under mysterious circumstances on 11 October, 1809. Lewis had been a friend of Wilson's for several years, and Wilson described several bird species collected by the Lewis and Clark expedition. These included Lewis' Woodpecker (*Melanerpes lewis*), Clark's Nutcracker (*Nucifraga columbiana*), and the Western Tanager (*Piranga ludoviciana*).

Wilson was determined to investigate Lewis' death. He carefully wrote down the account related to him by Mrs. Grinder, who, except for 2 servants, was the only one present when Lewis allegedly shot himself. He visited Lewis' grave, which was close to the Trace and covered with a few loose rails. Before leaving, Wilson gave Grinder money to build a fence around the grave. This area is now the Meriwether Lewis National Monument.

The contradictions in Mrs. Grinder's account troubled Wilson, and shortly after he resumed his journey, he stopped, rested, and composed a poem about Lewis' death. He carefully checked distances on the next stretch of the journey, and decided that the account of the events leading to Lewis' arrival at Grinder's Stand, as related to Thomas Jefferson by James Neelly, the Indian agent for the region, was innacurate. Wilson felt that Lewis had been murdered. He later published his report of Lewis' death, and it remains the only historical source on this enigmatic episode of American history (Cantwell 1961).

Shortly after finishing his poem, Wilson was awakened from his "melancholy reverie by the roaring of Buffalo River, which I forded with considerable difficulty" (Harper 1983:362). Other stream crossings in this area, especially the Little Buffalo River, were difficult because of indistinct fords and rocky bluffs along the banks. Wilson passed 2 or 3 solitary Chickasaw Indian huts, each surrounded by rough fields of maize. He spent the night, his last in Tennessee, in an Indian's cabin, near the headwaters of Cypress Creek. The exact location of this cabin is not given, but it may have been at McGlamery's Stand, just south of Collinwood in Wayne County.

The next morning, 7 May, Wilson rode 15 miles and stopped at an Indian's hut to feed his horse. This was probably near or just south of the Tennessee-Alabama line. Wilson had been carrying a pet Carolina Parakeet since catching it along the Ohio River, and wrote "He creeps into my pocket when I ride, and when I alight he comes out to amuse the people where I stop" (Hunter 1983:358). By this time the bird talked and knew its name. Wilson noted that the Indians were amused by the parakeet.

Wilson spent that night on the banks of the Tennessee River in present Lauderdale County, Alabama. During his travels through Mississippi, he passed through numerous swamps and lengthy cane thickets, suffered an attack of dysentery, and survived a tornado. He arrived at Natchez on 17 May, having traveled, according to his calculations, 478 miles in 14 days.

In his journal, Wilson wrote "I have performed alone, through difficulties, that those who have never passed the road can have no conception of" (Hunter 1983:373).

In addition to the bird records given above, "American Ornithology" contains notes on several other species in Tennessee. Some of these notes refer to "Chactaw and Chickasaw [Indian] countries," which, as noted above, included the southern portion of the Natchez Trace in Tennessee. These notes are presented here in current taxonomic order. Greater Prairie Chicken—Wilson (1811) did not mention personally observing prairie chickens in Tennessee, but described their range as "over the whole extent of the Barrens of Kentucky," which extended into Tennessee, and gave a second hand account of the drinking habits of one caught within a few miles of Nashville. Yellow-billed Cuckoo (*Coccyzus americanus*)—"numerous in the Chickasaw and Chactaw nations" (Wilson 1811). Chuck-will's-widow—"rarely found to the north . . . of Nashville, in the state of Tennessee, in the interior. . . .In the Chickasaw country, and throughout the whole Mississippi Territory, I found the present species very numerous in the months of April and May" (Wilson 1811a). Purple Martin (*Progne subis*)—Wilson (1812) commented that martins were numberous in Kentucky and Tennessee, and described gourds hung for their use by Chactaw and Chickasaw Indians. Barn Swallow (*Hirundo rustica*)—this species was either very rare or did not occur in middle Tennessee at the time of Wilson's visit, for he stated (1812) that he did not observe any during his travels from Lexington to the Tennessee River. American Crow (*Corvus brachyrhynchos*) and Common Raven (*C. corax*)—Wilson (1811) noted that a strong "antipathy" prevailed between the crow and the raven, and that the two rarely coexisted. He also noted "In travelling from Nashville to Natchez, a distance of 470 miles, I saw few or no Crows, but Ravens frequently, and Vultures in great numbers"(1811). Carolina Wren (*Thryothorus ludovicianus*)—"abundant over the whole extent of country from Pittsburg to New Orleans" (1811:83). Cerulean Warbler (*Dendroica cerulea*)—"the most numerous of its tribe in Tennessee and West Florida" (1811:83). Louisiana Waterthrush (*Seiurus motacilla*)—Wilson did not distinguish between the Louisiana and Northern (*S. noveboracensis*) Waterthruses, but noted "Among the mountain streams in the state of Tennessee, I found a variety of this bird pretty numerous, with legs of a bright yellow color" (1811); this almost certainly refers to the Louisiana Waterthrush. He further wrote "The cane breaks, swamps, river shores, and deep watery solitudes of Louisiana, Tennessee, and the Missippi Territory, possess them in abundance" (ibid.). This habitat description suggests he encountered migrating Northern Waterthrushes, but his description of the song better fits the Louisiana Waterthrush. Kentucky Warbler—"generally in all the intermediate tracts between Nashville and New Orleans, . . . In Kentucky and Tennessee it is particularly numerous, frequenting low, damp woods . . ." (1811:85). Hooded Warbler (*Wilsonia citrina*)—very abundant "through the whole extent of country south of Maryland, from the Atlantic to the Mississippi . . . abounds among the canes in the state of Tennessee' (1811). Eastern Meadowlark (*Sturnella magna*)—Wilson (1811) stated that he found this species in considerable numbers in the open woods with grassy understory of the Chactaw and Chickasaw countries.

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P.O. Box 402, Norris, TN 37828. Accepted 21 February 1986.

REQUEST FOR INFORMATION

If you plan to bird in the vicinity of the Cuba Landing exit of I-40 (at Kentucky Lake in southwestern Humphreys County) any time from now through 1987, please be alert for Ruffed Grouse (*Bonasa umbellus*). The University of Tennessee/Tennessee Wildlife Resources Agency grouse restoration project needs grouse records for the area. For more information, write to: Pete Kalla, University of Tennessee, Department of Forestry, Wildlife and Fisheries, P.O. Box 1071, Knoxville, TN 37901-1071; or call him collect at his home: (615) 584-7209. Thank you.

1986 BREEDING BIRD FORAY TO OVERTON COUNTY

Plan now on attending the 1986 Breeding Bird Foray, to be held in Overton County, Memorial Day weekend, 23-26 May. Headquarters will be at Standing Stone State Rustic Park. Fieldwork will be done in the framework of the Breeding Bird Atlas, and it will be an excellent opportunity to learn atlasing tactics. For more information, see the March 1986 *Tennessee Warbler* or contact Paul Hamel, Tennessee Dept. of Conservation, 701 Broadway, Nashville, TN 37219, phone (615) 742-6546 days or 356-9715 evenings.

THE 1985 CHRISTMAS BIRD COUNT

Richard L. Knight

In 1985, Christmas Bird Count participants tallied 144 species on 23 counts in Tennessee. Three additional species were "seen during count period" (3 days before and after count day), all at Reelfoot Lake. The number of species is yet another record high, breaking the marks set the last two years (142 in 1984 and 140 in 1983). The high number of species included a surprising variety of lingering migrants and several northern visitors. New to Tennessee CBCs were a Ross' Gull (first Tennessee record), and dowitcher sp. Details of the Ross' Gull sighting were submitted to and tentatively accepted by this compiler, pending action of the TOS Certification Committee. Other rarities included Red-necked Grebe (2nd Tenn. CBC record), Yellow-crowned Night-Heron (4th), Mute Swan (4th), White-winged Scoter (7th), N. Goshawk (6th), Merlin (7th), Sandhill Crane (5th), and Ovenbird (2nd). Several other unusual species were also seen. Most counts reported an above average number of species. Three counts found 100 or more species and another three had 90 or more. Chattanooga set a new state record with 108 species. The count at Cross Creeks NWR is new.

The fall of 1985 was much drier and warmer than average, even into late November. December brought a series of strong cold fronts. Most counts reported temperatures near or slightly below average. None were hampered by precipitation, but five eastern counts had snow cover.

Snow Geese were found on nine counts, including four in east Tennessee. Although duck numbers continue to decline overall, some areas had locally good numbers of some species. Among the 13 species of hawks reported, the following totals are noteworthy: Bald Eagle - 169 on 9 counts, N. Harrier - 73 on 19 counts, Sharp-shinned Hawk - 46 on 18 counts, Cooper's Hawk - 39 on 17 counts. Bobwhites were rather scarce. Record high numbers for a single CBC area were received for 13 species, most notably Common Snipe, Horned Lark, Golden-crowned Kinglet, Water Pipit, and House Finch. Red-breasted Nuthatches were found on all but two counts. Only one Bewick's Wren was reported, down from 14 each of the last three years. Most widespread among the lingering passerines were House Wren (3 counts), Palm Warbler (5 counts), Chipping Sparrow (7 counts), and Vesper Sparrow (6 counts). The House Finch explosion continues: they were found on 18 counts, with seven counts reporting over 100.

INFORMATION ON THE COUNTS

MEMPHIS—22 Dec.; 0700 to 1630; clear; temp. 34-59°F; wind NW, 5-15 mph; 41 observers in 13 parties; 130 party hours (97 on foot, 33 by car); 201 party miles (76 on foot, 125 by car). Dianne & William Bean, Gilbert Beaver, Carolyn Bullock, Fred Carney, Tina Carpenter, Robert Casey, Ben & Lula Coffey (compilers—672 N. Belvedere, Memphis 38107), Chris Creech, Dollyann Daily, Julian Darlington, Helen Dinkelspiel, Harold Elphingstone, Jack Embury, Robert Endres, James & Sue Ferguson, Bob

THE 1985 CHRISTMAS BIRD COUNT

	MEMP	REEL	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	PICK	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Common Loon	--	2	1	--	--	--	--	--	43	--	--	7	--	28	--	--	--	--	--	4	3	1	--
Pied-billed Grebe	7	2	12	3	3	3	--	6	24	--	6	15	3	155	18	4	32	--	5	19	3	1	--
Horned Grebe	--	--	--	--	--	--	--	--	26	--	--	2	3	41	2	2	5	1	--	--	1	1	--
Red-necked Grebe	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
Dbl.-cr. Cormorant	4	2	3	--	--	--	--	--	--	--	5	--	--	2	--	--	--	--	--	--	--	--	--
Great Blue Heron	12	35	98	4	12	35	5	3	27	4	19	3	--	106	280	9	119	1	9	41	2	2	--
Great Egret	--	--	2	--	--	--	--	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--
Green-backed Heron	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
Blk.-cr. Night-Heron	--	--	1	--	--	--	--	--	10	--	--	--	--	--	--	--	2	1	--	1	--	--	--
Yel.-cr. Night-Heron	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
Tundra Swan	--	--	6	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--
Mute Swan	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--
Snow Goose	--	10	4	2	--	1	--	--	--	--	2	--	--	--	1	--	1	--	1	1	--	--	--
Canada Goose	162	19M	8000	203	37	545	126	75	1931	23	450	396	23	20	3255	85	319	--	282	14	67	--	--
Wood Duck	104	30	13	--	--	21	4	3	--	--	--	8	--	15	--	--	4	1	--	4	--	1	--
Green-winged Teal	2	35	45	--	--	35	--	--	--	--	--	--	--	--	189	--	--	--	--	12	1	--	--
Amer. Black Duck	2	175	2500	--	12	56	--	12	1	--	569	50	6	3	671	11	31	--	39	18	29	36	--
Mallard	298	7000	6650	8	26	165	17	193	279	10	3031	340	11	274	7002	78	118	18	144	188	214	36	--
Northern Pintail	--	15	220	--	--	--	--	--	--	--	260	--	--	--	95	--	--	--	--	12	1	--	--
Blue-winged Teal	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Northern Shoveler	2	30	2	--	--	--	--	8	--	--	--	--	--	1	1	--	--	--	--	--	--	--	--
Gadwall	5	1250	390	--	3	21	--	435	21	--	253	--	--	122	221	--	91	--	--	30	5	--	--
American Wigeon	--	275	400	6	1	6	--	85	2	--	763	--	--	44	82	2	54	--	--	4	7	--	--
Canvasback	--	68	3	--	--	5	--	15	--	--	--	--	8	4	--	--	--	--	--	--	--	--	--
Redhead	1	35	--	--	--	5	--	--	1	--	--	--	4	24	--	--	7	--	--	1	1	--	--
Ring-necked Duck	--	450	554	15	4	67	--	240	7	--	56	--	121	34	32	--	10	--	1	81	3	1	--
Greater Scaup	--	1	--	--	--	--	--	--	--	--	--	--	--	158	2	--	--	--	--	3	--	9	--
Lesser Scaup	407	15	250	6	--	20	--	351	--	--	39	15	20	110	3	--	34	1	--	18	2	--	--
Scaup sp.	--	785	--	--	--	--	--	--	52	--	--	--	--	--	--	--	--	--	--	--	--	1	--
Oldsquaw	3	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
White-winged Scoter	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	--	--	--	--	--
Common Goldeneye	12	104	2	8	1	2	--	21	64	--	92	5	--	231	1	--	19	--	--	2	--	1	--
Bufflehead	--	165	2	--	--	--	--	81	28	--	--	6	--	49	5	--	8	--	--	--	89	51	--
Hooded Merganser	3	48	62	3	--	--	--	--	10	--	16	130	--	26	117	4	9	--	--	--	--	--	--
Common Merganser	--	2	10	--	--	--	--	--	1	--	--	4	--	13	--	--	1	--	--	--	--	--	--
Red-br. Merganser	--	18	1	--	--	--	--	--	--	--	--	--	--	1	--	1	13	--	--	--	--	--	--
Ruddy Duck	--	1085	--	--	--	--	--	2	3	--	--	--	--	3	3	--	--	--	--	--	3	--	--
Black Vulture	--	--	--	7	2	155	66	10	3	175	21	40	--	--	36	--	--	--	17	11	173	--	--
Turkey Vulture	--	--	1	83	6	--	--	1	--	11	3	41	--	7	4	--	--	--	50	19	31	1	--
Osprey	--	--	--	--	--	--	--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--

	MEMP	REEL	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	PICK	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Bald Eagle	--	136	3	3	--	--	--	--	--	--	--	3	11	3	8	1	--	--	--	1	--	--	--
Northern Harrier	7	11	12	11	1	4	--	2	1	6	3	1	1	3	5	1	1	--	--	1	1	1	--
Sharp-shinned Hawk	2	--	2	--	3	1	--	4	4	2	--	1	2	9	2	2	1	1	2	2	1	5	--
Cooper's Hawk	2	2	--	1	--	2	2	2	1	5	2	--	--	2	1	1	2	--	6	6	1	1	--
Northern Goshawk	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--
Red-shouldered Hawk	1	8	10	6	2	1	--	2	1	1	1	1	--	9	12	3	6	1	--	--	1	--	--
Red-tailed Hawk	48	39	25	44	15	22	18	31	18	23	10	10	--	41	17	9	27	2	20	15	13	5	2
Rough-legged Hawk	--	1	1	1	--	--	--	--	--	--	1	1	--	--	--	--	--	--	--	1	--	--	--
Golden Eagle	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Kestrel	24	46	4	28	9	18	13	39	41	65	8	37	4	14	15	5	20	16	20	43	31	15	--
Merlin	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Peregrine Falcon	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--	--	--	--	--	--
Ruffed Grouse	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	--	--	--	--	--
Wild Turkey	--	3	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Northern Bobwhite	43	18	12	25	16	1	--	16	41	43	--	4	--	16	28	--	8	7	--	9	8	1	--
Sora	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Coot	34	1800	15	2	--	4	--	2	41	--	36	5	--	2535	5945	--	66	--	--	20	18	--	--
Sandhill Crane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	--	--	--	--	--	--	--	--
Killdeer	144	5	86	20	4	7	6	51	54	4	--	5	4	213	310	14	169	26	15	55	17	21	1
Spotted Sandpiper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	--	--	--
Least Sandpiper	31	--	--	--	--	--	--	--	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dunlin	--	--	--	--	--	--	--	--	2	--	--	--	--	--	6	--	--	--	--	--	--	--	--
Dowitcher sp.	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	--	--	--	--	--	--
Common Snipe	6	3	44	20	--	3	--	2	17	3	7	--	--	38	340	--	14	--	--	2	1	2	--
American Woodcock	2	--	1	--	--	--	--	--	4	--	--	--	--	1	--	--	--	--	--	--	--	--	--
Bonaparte's Gull	--	52	--	--	--	--	--	--	9	--	--	--	--	64	1	--	2	--	--	--	--	--	--
Ring-billed Gull	136	472	164	--	--	3	--	--	931	--	40	150	--	662	872	1	788	--	--	137	54	19	--
Herring Gull	6	55	1	--	--	--	--	--	5	--	--	2	--	6	5	--	1	--	--	--	1	--	--
Ross' Gull	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Rock Dove	1	22	7	71	43	46	32	39	172	275	102	62	2	1002	46	107	133	48	68	572	155	184	--
Mourning Dove	369	156	60	223	142	62	130	271	227	164	31	108	27	505	432	143	525	192	178	168	121	83	--
Common Barn-Owl	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1	--	--	--
Eastern Screech-Owl	--	1	5	8	--	2	2	5	6	--	--	1	--	8	13	2	7	3	3	1	--	2	--
Great Horned Owl	--	1	8	4	--	4	2	9	2	2	--	1	--	4	4	--	9	2	--	1	2	--	1
Barred Owl	--	3	13	1	2	7	3	6	--	--	--	--	--	--	--	2	--	--	--	--	--	--	--
Belted Kingfisher	10	4	15	10	8	12	4	18	21	12	9	4	3	35	40	12	43	11	7	26	7	10	2
Red-headed Woodpecker	3	31	27	9	6	3	5	1	--	--	--	2	1	6	--	--	--	--	--	--	--	--	--
Red-bellied Woodpecker	84	44	30	40	54	28	47	101	36	17	5	12	10	57	35	16	53	10	13	21	10	5	1
Yellow-bel. Sapsucker	25	10	18	7	7	13	27	21	16	7	4	2	--	30	13	4	13	1	--	7	--	1	1
Downy Woodpecker	33	18	59	39	43	42	12	109	40	12	4	7	7	60	34	15	45	47	24	35	3	27	7
Hairy Woodpecker	12	10	9	3	8	6	3	7	5	6	2	1	--	10	11	4	9	9	--	7	1	3	--
Northern Flicker	105	42	24	23	31	27	20	54	43	17	11	11	6	77	35	10	33	3	8	17	1	10	--
Pileated Woodpecker	6	15	9	19	11	8	4	28	12	--	1	3	6	25	19	8	27	27	11	7	7	4	1
Eastern Phoebe	--	1	--	2	--	2	3	--	--	--	--	--	1	--	9	1	2	10	1	3	--	2	--

	MEMP	REEL	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	PICK	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Horned Lark	319	981	27	333	17	200	--	29	--	--	--	--	--	14	2	--	34	--	80	--	--	--	--
Blue Jay	222	40	198	199	500	35	116	235	157	59	62	198	82	318	195	130	286	45	59	189	47	109	19
American Crow	127	312	215	218	427	31	114	344	323	63	125	496	47	515	1015	514	1100	373	381	344	578	546	38
Common Raven	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	17	4	4
Black-capped Chickadee	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	--	--	--	--	--
Carolina Chickadee	181	71	86	140	376	67	36	225	102	113	57	15	12	495	171	141	219	346	80	122	28	87	18
Tufted Titmouse	63	25	68	182	417	67	25	173	35	63	38	7	16	268	96	48	86	154	56	91	15	43	17
Red-breasted Nuthatch	6	4	5	9	2	10	2	12	5	10	5	--	3	33	18	1	5	34	2	3	--	11	1
White-br. Nuthatch	--	8	9	59	27	4	--	53	--	1	--	1	6	57	13	28	31	57	16	31	5	15	6
Brown-headed Nuthatch	--	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--	--	--	--	--	--	--
Brown Creeper	11	5	4	3	--	4	--	11	10	4	1	1	--	16	5	4	10	27	2	1	--	--	2
Carolina Wren	86	16	27	20	23	22	6	53	53	9	4	5	3	134	98	45	146	100	26	44	9	36	14
Bewick's Wren	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
House Wren	--	--	--	--	--	--	--	--	1	--	--	--	--	1	--	--	--	1	--	--	--	--	--
Winter Wren	8	13	1	5	2	1	--	4	2	1	--	--	1	8	6	10	6	1	--	5	--	1	1
Sedge Wren	--	--	1	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
Marsh Wren	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Golden-cr. Kinglet	58	16	16	53	11	4	4	11	24	3	4	--	--	84	90	56	65	200	9	9	19	14	22
Ruby-crowned Kinglet	24	21	1	6	2	2	6	6	3	1	1	2	--	97	3	6	16	9	3	2	1	5	1
Eastern Bluebird	11	5	71	233	84	36	70	98	25	16	18	48	18	139	183	120	62	31	58	65	21	74	14
Hermit Thrush	9	10	12	7	1	8	18	13	3	--	--	--	--	20	10	1	4	8	--	1	1	8	1
American Robin	620	483	1421	217	116	680	215	167	644	123	61	7	81	37	135	20	97	27	4	23	9	60	1
Gray Catbird	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
Northern Mockingbird	144	15	24	94	45	28	34	123	88	71	16	50	4	191	60	30	135	9	33	61	40	33	1
Brown Thrasher	16	2	4	13	--	2	2	4	1	5	--	3	--	33	52	1	5	1	3	1	--	--	--
Water Pipit	46	--	67	--	--	--	--	--	1	--	--	--	--	39	746	3	492	--	--	2	2	45	--
Cedar Waxwing	280	93	172	27	37	1	18	18	14	--	--	--	--	38	81	6	42	18	--	2	--	--	15
Loggerhead Shrike	13	23	4	19	8	8	14	18	3	6	2	5	1	1	11	1	3	--	1	--	--	1	--
European Starling	1294	2735	2040	1857	2702	1500	4652	4083	6342	2500	4082	723	127	2190	560	583	2192	441	1443	1590	966	1190	--
Yellow-rumped Warbler	93	31	25	3	19	8	75	16	45	35	23	1	19	223	77	12	36	3	13	38	1	9	--
Pine Warbler	--	--	--	--	--	--	--	--	--	--	--	--	--	42	15	--	--	1	--	--	--	--	--
Palm Warbler	3	--	--	--	--	--	--	--	--	--	--	--	--	1	3	1	--	--	--	7	--	--	--
Ovenbird	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
Common Yellowthroat	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
Northern Cardinal	365	153	280	522	797	151	126	486	241	158	90	152	58	544	231	139	351	152	160	242	73	188	12
Rufous-sided Towhee	24	4	50	70	201	16	38	84	76	18	7	12	--	98	64	35	79	56	9	22	4	6	6
Amer. Tree Sparrow	--	4	2	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chipping Sparrow	15	--	--	8	--	--	--	--	--	--	2	10	--	11	37	--	--	--	--	--	--	25	--
Field Sparrow	86	165	87	286	160	32	50	150	81	87	57	24	17	116	178	135	153	94	102	93	12	82	6
Vesper Sparrow	8	1	--	5	--	--	--	--	--	--	--	--	--	2	2	--	1	--	--	--	--	--	--
Savannah Sparrow	79	3	46	38	2	2	2	2	24	--	--	1	--	69	175	--	68	--	3	4	--	--	--
Fox Sparrow	21	5	10	7	8	--	3	19	2	--	--	1	--	7	4	1	1	1	--	2	--	3	1
Song Sparrow	139	91	218	129	182	43	44	98	249	26	46	40	12	407	560	298	600	345	111	240	52	126	44
Lincoln's Sparrow	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Swamp Sparrow	56	245	273	13	21	18	19	18	37	12	--	--	--	49	385	31	34	5	--	19	--	1	1

	MEMP	REEL	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	PICK	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
White-thr. Sparrow	909	163	521	420	286	81	40	494	395	87	68	33	59	356	718	395	605	442	173	184	40	140	5
White-cr. Sparrow	62	2	19	100	262	12	10	70	37	10	13	--	--	11	4	16	16	1	18	7	67	1	--
Dark-eyed Junco	329	288	400	517	325	31	89	233	164	56	91	79	56	355	150	357	86	198	10	276	90	268	149
Lapland Longspur	2	18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Red-winged Blackbird	3430	1105	2970	199	83	193	10	850	1214	55	91	103	--	604	700	126	340	11	50	37	--	2	37	
Eastern Meadowlark	194	80	100	371	40	43	66	98	61	155	9	134	9	137	453	144	240	69	82	52	15	17	--	
Rusty Blackbird	371	23	96	5	1819	180	3	41	202	--	103	--	--	72	13	--	--	--	--	2	--	--	--	
Brewer's Blackbird	--	2	--	6	--	61	--	--	--	--	--	--	--	5	--	--	--	--	--	--	--	--	--	
Common Grackle	5528	1040	780	101	1014	500	675	1175	1425	20M	3563	4897	--	3218	5	350	110	--	2	19	--	3	--	
Brown-headed Cowbird	571	100	415	62	1	70	--	261	8	70	3144	--	2	319	--	--	41	--	--	10	--	--	--	
Purple Finch	114	9	75	83	106	132	211	124	65	70	60	77	19	98	15	45	41	9	29	35	4	36	1	
House Finch	6	--	--	--	12	110	2	26	35	254	419	13	--	91	15	65	107	66	371	188	65	152	--	
Pine Siskin	12	--	6	--	14	128	--	14	1	2	--	--	--	33	9	--	--	--	1	--	--	--	--	
American Goldfinch	187	141	286	291	357	244	55	221	259	269	112	26	30	388	294	192	310	100	100	138	53	136	9	
Evening Grosbeak	114	--	64	8	--	113	--	26	3	--	--	--	--	4	1	9	--	66	7	--	--	64	8	
House Sparrow	415	1370	36	336	163	33	8	97	110	350	85	152	86	349	68	29	118	41	70	80	47	110	13	
Number of Species	87	101	100	80	69	83	59	83	90	58	66	71	47	108	97	69	90	64	60	87	68	70	38	

M = 1000

Ford, Bill Fowler, Joe Guinn, Van Harris, Ginger & Robert Ilardi, Theresa Irion, Susan Keeton, David Kesler, Jo Levy, Selma Lewis, Jesse McCabe, James Olcese, Gerald Papachristou, George Payne, Bill & Rob Peeples, Virginia Reynolds, Richard Taylor, Philip Waldon, Martha Waldron, Richard Whittington, Patricia Wood, Oldsquaw (RW, LC) was the first Shelby County record. Low numbers for Downy & Pileated Woodpeckers, N. Flicker, towhee, Field, Song & Swamp Sparrows, and junco (*fide* BC).

REELFOOT LAKE—21 Dec.; 0630 to 1630; clear; temp. 11-29°F; wind W, 0-5 mph; 10 observers in 4 parties; 40.5 party hours (11.5 on foot, 29 by car) plus 1 owling; 204 party miles (12 on foot, 192 by car) plus 5 owling. Ben & Lula Coffey, Wendell Crews, Harold Elphingstone, William B. Fowler, Jr., Don & Gina Manning (compilers—Rt. 1, Box 303, McKenzie 38201), Glenn H. Stanley, Michael & Wallace Todd. Eight of the Snow Geese were of the blue form. Of the Bald Eagles: 69 ad. & 67 im. Seen during count period—Tundra Swan, Greater White-fronted Goose (2), Black Vulture, Sharp-shinned Hawk, Short-eared Owl, Fish Crow, LeConte's Sparrow, and Evening Grosbeak. Good details submitted for unusual species.

CROSS CREEKS NATIONAL WILDLIFE REFUGE—21 Dec.; 0400 to 1700; clear; temp. 14-33°F; wind W, 0-6 mph; 10 observers, 9 in 4-6 parties plus 1 at feeders; 43 party hours (28.5 on foot, 14.5 by car) plus 4.5 at feedes, 6.5 owling; 246 party miles (23 on foot, 223 by car) plus 17 owling. Patty Bieber, Donald Blunk, Eddie Burchett, Camille Crenshaw, Mike Filson, Maxey Irwin, Debbie Main, John Robinson (compiler—P.O. Box 215, Dover 37058), Barbara & Stephen Stedman. Two of the Bald Eagles were adults. Seen during count period—Ruddy Duck, Black Vulture, E. Phoebe, Pine Warbler, Chipping Sparrow. No details submitted for unusual species.

BUFFALO RIVER—28 Dec.; 0600 to 1730; clear; temp. 23-43°F; wind SW, 10-15 mph; 15 observers, 13 in 6 parties plus 2 at feeders; 62 party hours (29.5 on foot, 32.5 by car) plus 3 at feeders, 0.25 owling; 428 party miles (29 on foot, 399 by car) plus 4 owling. Andy Augustin, Ellen Beatie, Michael Beuerlein, Helen Clayton, David Ihrie, Chester & Dot McConnell, Royce Neidert, Ned Piper, Mark Reeves, Damien Simbeck (compiler—Rt. 2, Box 3A, Loretto 38469), Don Simbeck, Susanne Wadsworth, Morris Williams, Wylie Willis. One Snow Goose was of the blue form. One Bald Eagle was an adult. Also, one *Accipiter* sp. was reported. Good details submitted for unusual species.

CLARKSVILLE—28 Dec.; 0700 to 1600; clear; temp. 22-47°F; wind WNW, 5-15 mph; 23 observers, 7 in 4 parties plus 16 at feeders; 36 party hours (18 on foot, 18 by car) plus ? at feeders; 231.5 party miles (17.5 on foot, 214 by car). George R. Beringer, Mike Filson, Scott Gunn, Annie Heilman, Bill Hudson (compiler—619 Idlewood Dr., Clarksville 37043), Bill & Gloria Milliken. Names of feeder watchers not submitted. An additional 11,000 unidentified blackbirds were reported.

COLUMBIA—28 Dec.; clear; temp. 20-40°F; wind NW, 0-8 mph; 12 observers, 10 in 4 parties plus 2 at feeders; 29.5 party hours (17.5 on foot, 12 by car) plus 8 at feeders; 267 party miles (12 on foot, 255 by car). Kenneth Anderson, Daniel Gray, William Jernigan, Allyn Lay, Anne & Bedford Lochridge, Mary Lyles, Cleo Mayfield, George Mayfield (compiler—999 Sunnyside Dr., Columbia 38401), Allen Pressnell. Names of feeder watchers not submitted. Seen during count period—Peregrine Falcon.

DUCK RIVER RESERVOIR—21 Dec.; 0500 to 1700; clear to partly cloudy; temp. 10-29°F; 7 observers in 4 parties; 29 party hours (19.5 on foot, 7 by car, 2.5 by canoe) plus 1.5 owling; 155 party miles (9 on foot, 142 by car, 4 by canoe) plus 10 owling. Kenneth Anderson, Bill Jernigan, Bedford Lochridge, George Mayfield, Mike Penrod, Allen Pressnell (compiler—Rt. 5, Box 261, Columbia 38401), Dianne Pressnell. In addition, 3 *Accipiter* sp. were reported. Seen during count period—Am. Black Duck, Sharp-shinned Hawk, Wild Turkey, N. Bobwhite.

NASHVILLE—28 Dec.; 0530 to 1800; clear; temp. 20-50°F; wind N, 5-10 mph; 44 observers, 39 in 7-12 parties plus 5 at feeders; 91 party hours (81 on foot, 10 by car) plus 15 at feeders, 1.5 owling; 320 party miles (25 on foot, 295 by car) plus 0.5 owling. Jan Alexander, Linda Anderson, Rachel Anderson, John & Willa Bates, Elizabeth Collins, Kin Cosner, Annella Creech, Camille Crenshaw, Milbrey Dugger, Clifton Dunn, John Ellis, Bill & Lucy Finch, Ray Fleischer, Katherine Goodpasture, Dewey & Ruth Griffin, Mary Anne & Tom Guschke, Barbara Harris, Bob Hatcher, John Herbert, Maxey Irwin, Louise Jackson, Galen Lenhert, Portia Macmillan, Margaret Mann, Deane McGurk, Marge & Oscar Patrick, Larry Raye, Richard Simmers, Donna Smith, Ann Tarbell (compiler—6033 Sherwood Dr., Nashville 37215), David Vogt, Kenneth Walkup, Miriam Weinstein, Betty Worden. Names of feeder watchers not submitted. The Oldsquaw was present on Radnor Lake for several days (m. ob.). In addition, 2700 unidentified blackbirds were reported.

HICKORY-PRIEST—4 Jan.; 0430 to 1730; cloudy; temp. 31-59°F; wind SSW, 5-20 mph; 24 observers, 20 in 10 parties plus 4 at feeders; 72.5 party hours (54.5 on foot, 18 by car) plus 16 at feeders, 3 owling; 285 party miles

(21 on foot, 264 by car) plus 5 owling. Jan Alexander, Linda Anderson, Dot & Paul Crawford, Rowan DeBold, Jerry Drewry, John Ellis, Bob English, Katherine Goodpasture, Mary Anne & Tom Guschke, Paul Hamel, Louise Jackson, Hazel & Lee Kramer, Dick Newton, Jim Snapper, Pat Stallings (compiler—406 N. 17th St., Nashville 37206), Ann Tarbell, David Vogt. Names of feeder watchers not submitted. One Canada Goose was reported as the Richardson's race. Good details submitted for unusual species.

MURFREESBORO—4 Jan.; partly cloudy; high temp. 40°F; windy; 17 observers, 13 in 5 parties plus 4 at feeders. Bertha & Jim Chrietzberg, Russell A. Driver, Lou A. Erwin, C. E. Greever, Edith Haynes, Anne L. Hettish (compiler—1018 Lawndale Dr., Murfreesboro 37130), John Hooper, Wilma J. Hunter, David McCarroll, Ruth V. McMillan, Gene & Ruth Odom, John Patten, Alberta Spence, Frances Vaughan, Terry J. Witt. Seen during count period—Red-breasted Merganser.

LEBANON—28 Dec.; partly cloudy; temp. 24-45°F; 8 observers, 6 in 2 parties plus 2 at feeders. Earline C. Berry, Linda Bowman, Fred Detlefsen, Donald C. Jenkins, Ruth V. McMillan (compiler—Rt. 2, Box 141, Lascassas 37085), Margaret Partee, Ray Pope, Marty Rush.

HIGHLAND RIM—28 Dec.; clear to partly cloudy; temp. 20-40°F; 17 observers in 7 parties; 34 party hours; 342 party miles. Marjory Harper, Marguerite Hernandez, Ruth Luckadoo, Nicky Medley, Philip Medley (compiler—Rt. 2, Box 173B, Hillsboro 37342), Anna Parker, Erma Rogers, Mary Elizabeth Shelton, Mr. & Mrs. Norm Troy, Violette Wakeland, Monty Wannamaker, Evelyn Wilson, Doug Wimberly, Wanda Winnet, Mr. & Mrs. Grady York.

PICKETT COUNTY—27 Dec.; 0700 to 1600; partly cloudy; temp. 33-48°F; windy; 2 observers in 1 party; 9 party hours; 28 miles by car. Dave & Robbie Hassler (compilers—Rt. 1, Box 164A, Byrdstown 38549). One gull sp. was also reported.

CHATTANOOGA—21 Dec.; 0500 to 1830; clear to mostly cloudy; temp. 10-34°F; wind NW-NE, 0-15 mph; snow 0-1 in.; 51 observers, 46 in 13 parties plus 5 at feeders; 127 party hours (80 on foot, 47 by car) plus 29 at feeders, 15 owling; 565 party miles (71 on foot, 494 by car) plus 59 owling. Carl Adams, Louise Cash, David Chaffin, Brainerd Cooper, Robert Crawford, Angela Davis, Paul Dietrich, Ken & Lil Dubke, Jack & Paul Freeman, Paul Harris, John Henderson, Ella & J. N. Howard, Daniel & Kathy Jacobson, Albert Jenkins, Leonard Kafka, Ross Kindermann, Starr Klein, Sandy Kurtz, Jonnie Sue Lyons, Barbara & Mike McMahan, Graham Means, Robert Mitchell, Johnny Parks (compiler—1610 E. 17th St., Chattanooga 37404), David & Tom Patton, David Pierce, Kay Prigmore, Arthur Richert, Charles Robertson, Peter Robinson, Robin Rudd, Gene Ryther, Cindy & Joe Stone, Carl & Chris Swafford, Craig & Susan Watson, John Whitaker, Dan Williams, Dick Wodzenski. The Yellow-crowned Night-Heron was an adult (B&MM). The Bald Eagles and the Peregrine Falcon were also adults. Good submitted on unusual species.

HIWASSEE—1 Jan.; 0700 to 1800; clear; temp. 26-47°F; wind N, 3-12 mph; 24 observers in 11 parties; 82 party hours (57 on foot, 21 by car, 4 by boat) plus 3 owling; 383 party miles (40 on foot, 331 by car, 12 by boat) plus 14 owling. Del Blum, Angela Davis, Paul Dietrich, Ken & Lil Dubke, Gertrude Fleming, David Hankins, Ross Kindermann, Rick Knight, Tony

Koella, Gilda Lyon, James Miller, Charles Nicholson, Johnny Parks (non-participating compiler), Mark Reeves, James Rowell, Robin Rudd, Boyd Sharp, Billy & Mary Shewall, Barbara & Steve Stedman, Rick Waldrop, Craig & Susan Watson. The Snow Goose was of the blue form. In addition, 1500 duck sp. and 2 *Accipiter* sp. were reported. Two of the Bald Eagles were adults. The Peregrine Falcon was an immature. Good details submitted for unusual species.

NORRIS—28 Dec.; 0615 to 1830; partly cloudy; temp. 23-42°F; wind NW, 0-5 mph; 16 observers, 13 in 5 parties plus 3 at feeders; 33.5 party hours (25.5 on foot, 8 by car) plus 3 at feeders, 1.5 owling; 172.5 party miles (19.5 on foot, 153 by car) plus 3 owling. Kimberlee Adkins, Ruth Barber, Marian Baxter, John Byrd, Pat DeRoos, Grace Foster, Linda Fowler, Maurice Grigsby, David Hankins, David Highbaugh, Charles Nicholson (compiler—Box 402, Norris 37828), Boyd Sharp, Keith Watson. The Bald Eagle was an adult. Seen during count period—Savannah Sparrow.

KNOXVILLE—21 Dec.; 0600 to 1730; partly cloudy; temp. 17-31°F; wind W, 0-8 mph; snow 0-1 in.; 26 observers, 25 in 12 parties plus 1 at feeders; 104 party hours (68 on foot, 36 by car) plus 6 at feeders, 5 owling; 502 party miles (54 on foot, 448 by car) plus 50 owling. Jane Beintema, Charles Callis, Robert Collier, Marcia Davis, Barbara Finney, Barry Fleming, David Hankins, Paul Hartigan, David Highbaugh, Tom Howe, J. C. Howell, Susan Hoyle, Hal Hubbs, Tony Koella, Bettie & James Mason, Charles Nicholson, Holly Overton, J. B Owen, Parl Pardue, Mark Reeves, Boyd Sharp, James Tanner (compiler—Rt. 28, Box 155, Knoxville 37920), Keith Watson, Roland Wauer. The dowitcher sp. were seen by RW *et al.*, but no further details were provided. Good details were submitted for the other unusual species. Three *Accipiter* sp. were reported. Seen during count period—Bald Eagle.

GREAT SMOKY MOUNTAINS NATIONAL PARK—4 Jan.; 0615 to 1645; partly cloudy to overcast; temp. 20-48°F; wind light & variable; 30 observers in 12 parties; 76 party hours (55.5 on foot, 20.5 by car); 286.5 party miles (87.5 on foot, 199 by car). Bettie Adams, Howard Chitwood, Bobby & R. H. Collier, Don Defoe (compiler—GSMNP, Gatlinburg 37738), Al & Grace Foster, Jo Ann Fowler, Linda Fowler, Louise Fuller, David Hankins, Chris & Paul Hartigan, David Highbaugh, Audrey & Ron Hoff, J. C. Howell, Susan Hoyle, Hal Hubbs, Burt Jones, John Lackey, Sally Mirick, Charles Nicholson, J. B. Owen, Paul Pardue, Truett Patterson, Boyd Sharp, James Tanner, Craig Walker, Keith Watson, Ro Wauer. The chickadees were a mixture of Black-capped and Carolina. One *Accipiter* sp. was also reported.

GREENEVILLE—30 Dec.; partly cloudy; temp. 25-40°F; 17 observers in 12 parties; 78 party hours; 126 party miles (18 on foot, 108 by car). Orland & Phine Britton, Howard Earnest, Marjorie Earnest, Ann Gaut, King & Margaret Gaut, Juanita & Lenard Heckert, Richard & Willie Ruth Nevius, Dan Nieves (compiler—112 Magnolia Dr., Greeneville 37743), Terry Nieves, Doug Ratledge, Helen & Royal Spees, Virginia Williams. The Spotted Sandpiper was seen by WRN.

KINGSPORT—22 Dec.; 0600 to 1815; partly cloudy; temp. 14-35°F; wind SW, 0-5 mph; snow 0-1 in.; 18 observers, 17 in 5 parties plus 1 at feeders; 50 party hours (27 on foot, 23 by car) plus 6 at feeders, 2 owling; 352 party

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MINUTES OF THE 1985 FALL MEETING AND SYMPOSIUM

The 1985 Fall Meeting and Symposium, consisting of a Board of Directors meeting, symposium, and field trips, was held at Fall Creek Falls State Park, Tennessee, 1-3 November 1985.

BOARD OF DIRECTORS MEETING

The Board of Directors meeting was called to order by President James Ferguson on 2 November. The minutes of the 4 May 1985 meeting were distributed to the directors and approved as printed.

REPORTS OF OFFICERS

VICE PRESIDENT for East Tennessee, Lil Dubke, introduced the chapter presidents in her district who reported on chapter activities. Reporting were Paul Dietrich, Chattanooga; Mrs. Orland Britton, Greeneville; Marcia Davis, Knoxville, and Rick Knight, Lee Herndon Chapter, whose report was read in his absence. Mrs. Dubke thanked the Chattanooga Chapter for their work in making this a successful meeting. VICE PRESIDENT for Middle Tennessee, Tom Guschke, reported on his area's activities. The Monsanto plant in Maury County is closing in 1986 and he hopes some way will be found to maintain the settling ponds which are such an excellent place for marsh and shore birds. He noted the prospective new TOS chapter in Springfield and welcomed them. VICE PRESIDENT for West Tennessee, Dollyann Daily, was absent and Martha Waldron reported for her that West Tennessee had added a new bird to the state list, the Long-billed Curlew.

DIRECTOR-AT-LARGE for East Tennessee, Dee Eiklor, inquired about when *The Migrant* could be expected. In the absence of DIRECTOR-AT-LARGE for Middle Tennessee, Ruth McMillan, Fred Detlefsen reported on the activities of the John W. Sellars Chapter. DIRECTOR-AT-LARGE for West Tennessee, Don Manning, had no report, nor did the SECRETARY, Carolyn Bullock.

TREASURER George Payne reported 891 members for 1985 to date. The financial report for the period 1 May - 1 November 1985 listed income of $3,472.34, expenses of $4,249.07, and a capital reserve of $26,887.37.

CURATOR James Tanner reported sales of back copies of *The Migrant* from May through October 1985 totaled $291, expenses were $19.67 and that all back issues are available.

EDITOR of *The Migrant*, Charles Nicholson, reported that all issues through September 1985 should be mailed by the end of this year, and he is working hard to get it on schedule. He has obtained a new printer which should reduce printing costs by about 30 percent. He asked for suggestions for a possible special issue of *The Migrant* in connection with the joint TOS/Wilson Ornithological Society meeting in 1986.

REPORTS OF COMMITTEES AND SPECIAL ASSIGNMENTS

FINANCE—President Ferguson noted that a Finance Committee should have been appointed at the 1985 spring meeting and that to fulfill that requirement he has asked the previous members to serve. They are

Richard Taylor, Chairman, William Whitley, James Tanner, David Pitts, and George Payne, *ex officio*. Helen Dinkelspiel moved their appointment to serve until the spring 1986 meeting; the motion was seconded and passed.

CONSERVATION—President Ferguson expressed appreciation for the work of outgoing Chairman Angela Davis and appointed Ken Dubke Chairman, who read his acceptance letter and noted that he would like it to be called the Conservation Education Committee and wants each chapter to have a Conservation Chairman. He introduced committee member David Pitts who told about a request for TOS to participate in "Homecoming '86" by organizing a bluebird project. Following discussion, a motion was passed to authorize spending up to $100 for this project. David Pitts accepted responsibility for implementing this project, and chapter representatives were asked to solicit help from their chapters.

CERTIFICATION—President Ferguson announced the appointment of the following members: Charles Nicholson, *ex officio* Chairman; from East Tennessee, Rick Knight to serve until 1986 with James Tanner as alternate; Middle Tennessee, Steve Stedman until 1988 with David Vogt as alternate; West Tennessee, David Pitts until 1987 with Martha Waldron as alternate.

BIRD ATLAS—A motion was made and passed to make the previous steering committee a standing committee. The members are: Chairman Paul Hamel, Charles Nicholson, Bob Hatcher, Fred Alsop, Martha Waldron, Steve Stedman, Barbara Stedman, and Jim Ferguson *ex officio*, with the 9 regional coordinators also members. Chairman Hamel proposed that this project be publicly announced and included on the list of "Homecoming '86" events.

SPECIAL ASSIGNMENTS—Lil Dubke, in charge of Patches and Decals, announced that all decals have been distributed and asked for an inventory from all chapters. There will soon be new patches and decals and a new assignment director. In the absence of *Tennessee Warbler* Editor Buzz Bean, the president apologized for the delayed delivery in October and assured members that this will be corrected in future mailings. President Ferguson expressed his appreciation to Fred Alsop, Fall meeting Director, for his fine work in getting programs together, and announced that Steve Stedman will be Fall Meeting Program Director for 1986-1987. Stedman asked for a chapter to volunteer to host the 1986 fall meeting, to be announced in the next *Tennessee Warbler*, and asked for paper contributors to contact him.

NEW BUSINESS

President Ferguson announced that a new chapter is being formed and welcomed Donna Smith, who told about the group of 14 members in Springfield which will be called the Red River Chapter.

The location of the 1986 Foray will be announced in the next *Tennessee Warbler*. It was moved and passed to hold it on Memorial Day weekend.

President Ferguson read into the minutes a letter he had written to Wendell L. Whittemore and Mrs. William M. Walker in recognition of their 50 years of membership in the Society.

ANNOUNCEMENTS

Charles Nicholson gave information on the annual TOS/Wilson Ornithological Society joint meeting to be held 17-20 April 1986 in Gatlinburg. President Ferguson asked for news for the *Tennessee Warbler* to be submitted early. He thanked Fred Alsop, all symposium speakers, and Paul Dietrich and the Chattanooga Chapter for the great meeting.

SYMPOSIUM

The afternoon paper session, coordinated by Fred J. Alsop, III, was held on 2 November. The following papers were presented:

ROBERT M. HATCHER—The 1985 Peregrine Falcon and Bald Eagle restoration program in Tennessee.

PAUL C. HARRIS—Waterbirds observed during TVA's summer drawdown of Chickamauga Lake.

LINDA CARTWRIGHT—Status of the Red-cockaded Woodpecker in the Big South Fork Area and general Red-cockaded Woodpecker habitats.

PETER I. KALLA—Ruffed Grouse restoration program in Tennessee.

THOMAS E. BEDDOW—The Watts Bar nesting Osprey population. (paper read by F. J. Alsop).

PAUL B. HAMEL—The 1985 Cumberland County Foray.

CHARLES P. NICHOLSON—The Tennessee Breeding Bird Atlas.

The evening program, "A late Pleistocene - Early Holocene avifauna from Middle Tennessee," was presented by PAUL W. PARMALEE.

CAROLYN BULLOCK, Secretary.

PREVENTING WINDOW-STRIKES BY BIRDS—One effective method of preventing birds from striking windows, with often fatal results, is to hang ¾-inch mesh nylon or plastic netting about 4-6 inches in front of the window panes. Netting of the sort used to prevent bird-predation on fruit trees is effective, as it stops flying birds short of the window and it does not unduly obstruct viewing through the window. This solution came to our attention in the early 1970s when a friend, Donald P. Scott, in Panama City, Florida, showed us how he had affixed part of a fishing seine across a large window in order to prevent birds from striking it. Although this method of preventing window-strikes was mentioned briefly in a recent article on the subject by Daniel Klem, Jr. ("Window Pains," *The Living Bird Quarterly* 4:21, 1985), it is also offered here because many TOS members may not have access to this journal. Bird-netting of the sort noted above is available through most garden suppliers (both retail and mail order) at a relatively inexpensive price.

STEPHEN J. STEDMAN, Rt. 6, Pinewood Rd., Franklin, TN 37064 and BARBARA H. STEDMAN, Rt. 6, Pinewood Rd., Franklin, TN 37064. Accepted 8 February 1986.

ROUND TABLE NOTES

FIRST EAST TENNESSEE RECORD OF BLACK-NECKED STILT—On 1 August 1985 at 1200 hours, while censusing shorebirds at the Eagle Bend Fish Hatchery, Clinton, Anderson County, Tennessee, I spotted a bird which I immediately recognized as a Black-necked Stilt (*Himantopus mexicanus*). The bird had a glossy black back which sharply contrasted with white underparts, indicating that it was an adult male. The long, bright red legs and white eye markings were clearly evident with 7x35 binoculars at a distance of 50 m. The bird was feeding at the edge of one of the larger fish-rearing ponds that contained shallow water. I immediately left the hatchery to alert other people of the bird's presence. Subsequently, Charles Nicholson arrived shortly thereafter to view and photograph the bird (Figure 1). While he and I were watching the bird at about 1300, it flew to the SE for a km or more, almost disappearing in our binoculars, but then returned to the hatchery ponds. Although many people saw the bird that afternoon, it was not present the following morning or thereafter.

On 22-25 July, prior to this sighting, Hurricane Bob moved easterly across Florida, up the Atlantic coast, and finally came ashore again north of Savannah, Georgia. Winds during this period in and around Tennessee were abnormally strong (20-25 mph) and predominantly from the south and southeast (Daily Weather Maps, National Weather Service). From 24 July to 1 August, east Tennessee was under the influence of a widespread low pressure system that resulted in cloudy, rainy weather. In the eastern U.S., the stilt breeds in southern Florida and portions of the Atlantic and Gulf coastal plain from New Jersey to Texas. It is possible that the bird was affected by the hurricane and became disoriented by the cloudy skies and rainy, unsettled weather.

Figure 1. Black-necked Stilt at Eagle Bend Fish Hatchery, Tennessee, 1 August 1985. Photograph by Charles P. Nicholson.

The first Tennessee record of this species was 2 birds seen by David Phillips on 21 March 1981 in a wet soybean field in northeast Shelby County near Memphis (Coffey, *Migrant* 56:1-3, 1985). Since then, a pair of Black-necked Stilts have successfully nested and raised young at the sewage lagoons near Memphis in 1982 and 1984 (Coffey, *ibid.*). The Clinton sighting represents the first east Tennessee record of a Black-necked Stilt.

LINDA J. FOWLER, Rt. 4, Box 541, Valley Lane, Clinton, TN 37716. Accepted 12 November 1985.

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miles (18 on foot, 334 by car) plus 40 owling. Fred Alsop, Reba & Robert Baker, Chris Brown, Sandra Driskell, George Ford, Jim Gilland, Charles Hasbrouck, Wynn Herbert, Rick Knight, Tom Laughlin, Betsy McConnell, Rick Phillips, Tom Pridgen, E. E. Scott, Arthur Smith (compiler—100 Otari Dr., Kingsport 37664), Frank Williams. The Snow Goose was of the blue form. The Bald Eagle was an adult. Spotted Sandpiper by FA, TL, RP. In addition, a probable Ash-throated Flycatcher (*Myiarchus cinerascens*) was observed at close range by FA, TL, RP. Details at this observation will be published.

BRISTOL—28 Dec.; 0730 to 1730; 9 observers. Wallace Coffey, Bert & Ken & Loraine Hale, Joe Jackson, Richard Lewis (compiler—Rt. 3, Box 590, Bristol 37620), David McPeak, Arron Trent, Enno Van Gelder.

ELIZABETHTON—28 Dec.; 0545 to 1730; clear to partly cloudy; temp. 24-40°F; wind WSW, 5-30 mph; snow 0-4 in.; 13 observers in 6 parties; 53 party hours (28.5 on foot, 24.5 by car) plus 1 owling; 285 party miles (14 on foot, 271 by car) plus 33 owling. Richard Clark, Brian Cross, Martha Dillenbeck, Helenhill Dove, Glen Eller (compiler—Rt. 9, Box 1340, Elizabethton 37643), Harry Farthing, Sally Goodin, Dick Hegler, Rick Knight, Joy Kyle, Ed Schell, Glenn Swofford, Frank Ward. The Red-necked Grebe was seen by RC & RK.

ROAN MOUNTAIN—30 Dec.; 0615 to 1700; clear; temp. 5-29°F; wind SSW, 5-25 mph; snow 1-5 in.; 4 observers in 2 parties; 17 party hours (12 on foot, 5 by car) plus 1.5 owling; 87.5 party miles (13.5 on foot, 74 by car) plus 16 owling. Glen Eller (compiler), Rick Knight, Tom Laughlin, Ed Schell. The Killdeer was seen flying over Grassy Ridge, elevation 6100+ feet.

THE SEASON

FALL MIGRATION: 1 AUGUST-30 NOVEMBER 1985

Once again, this was a fall with generally lower than average rainfall, and, at least for November, higher than average temperatures. Numerous species lingered later than normal throughout the state, and there were new local late records set for several species across the state. Few pronounced cold fronts passed through in September or October, and there were few reports of large waves of migrating passerines. As if to make up for an unspectacular passerine migration, there was a very good shorebird migration, and several notable observations of waders, waterfowl, and other groups. If the volume of information is any measure, this was an exciting season, as this is one of the longest season reports ever published in *The Migrant*. I cannot remember a fall when there have been more first and second state records reported. New to the state and well-documented were a Long-billed Curlew and a Parasitic Jaeger. The first well-documented Say's Phoebe was reported, although it is apparently the second state record. Other second state records included a Black-bellied Whistling-Duck, Snowy Plover, and Groove-billed Ani. Very unusual species were a Marbled Godwit, the first Black-necked Stilts outside of the Memphis area, a Red Phalarope, and a Common Ground-Dove. The high number of Peregrine Falcon reports from across the state is encouraging. Unfortunately, the opposite is true of a Wood Stork which died in the southeast corner of the state. Despite the warm November weather, large flocks of waterfowl were reported in east Tennessee on 22 November, and many waterfowl species were present in fair numbers by the end of the season. Red-breasted Nuthatches were reported from throughout the state in mid-September, and Evening Grosbeaks were widespread by the end of the period.—CHARLES P. NICHOLSON.

Abbreviations used in the following reports include: ers - earliest report of season; lrs - latest report of season; max - maximum number during season; m. ob. - many observers.

WESTERN COASTAL PLAIN REGION—Several infrequent and/or rare visitors, such as Tri-colored Heron, Black-bellied Whistling-Duck, Sandhill Crane, Whimbrel, Marbled Godwit, and Groove-billed Ani were observed this season. Two species observed in the region were new to the state list—a Long-billed Curlew and a Parasitic Jaeger. Low water in the Mississippi River exposed miles of shoreline and sandbars, and these habitats, as well as other areas throughout the region, were checked regularly. Interest and enthusiasm of observers was high and there were many reports from throughout the region.

Loon—Ruddy Duck: RED-THROATED LOON: 14 Nov (1) PLS (Maxey Irwin, CKC, DWB). Pied-billed Grebe: 27 Sep (56) RCI (JRW). Horned Grebe: 13 Oct (1), 17 Nov (21) PAP (JCR). Anhinga: 3 Aug (2) (SJS), 10 Aug (1) REL, LKC (MPS). Double-crested Cormorant: 14 Sep (235) Kirby Pocket, REL, OBC, (SNK, NPM, MGW); 26 Oct (350) REL (MCT, WT). TRICOLORED HERON: 3 Aug (1) Walls, MS (BBC, LCC); 18 Aug - 7 Sep (1) ESL (JRW, CHB, BBC, LCC, SJS, MGW). Cattle Egret: 17 Nov (1) BRF (JCR). Black-crowned Night-Heron: 17 Sep (1 ad) Allen Steam Plant, Shelby Co. (JRW). **BLACK-BELLIED WHISTLING-DUCK:** 24-30 Nov (1) PEF (JRW, TOS); second state record, details should be published. Green-winged Teal: 31 Aug (6) I13 (SJS, BHS, ARH). Blue-winged Teal: 1 Sep (197) I13 (DAD, JRW). Redhead: 31 Aug (1) S of Tiptonville, LKC (SJS, BHS, ARH), summered. Oldsquaw: 26-27 Oct (1) PAP (DJS, SJS, BHS, JCR, ARH). Hooded Merganser: 17 Nov (95) BSU (JCR). Red-breasted Merganser: 17 Nov (91) PAP (JCR). Ruddy Duck: 26 Oct (3000) REL, LKC (MCT, WT).

Osprey—Falcon: Osprey: 31 Aug (2), 7 Sep (2), 29 Sep (1) ESL (BBC, LCC, JRW, MTOS); 14 Sep (14), 2-9 Oct (1) I13 (WGC); 26 Oct (1) REL (MCT, WT). Mississippi Kite: 21 Sep (1) Randolph, TN (BBC, LCC). Bald Eagle: 26 Oct (4) REL, LKC (MCT, WT). Sharp-shinned Hawk: 9 Sep (1) MEM (JRW); 14 Sep (1) I13 (JRW); 21 Sep (1) PEF (CHB, JRW); 2 Oct (1) FPP (HBD, CHB); 5 Oct (1) ESL (CHB, JRW); 12 Oct (3) Lower Hatchie NWR (MTOS); 27 Oct (1) SFP (MTOS); 9 Nov (1) Decatur Co. (CHB). Cooper's Hawk: 5 Oct (1) ESL (JRW); 27 Oct (1) SFP (JRW). Rough-legged Hawk: 6 Oct (1) ESL (SNK, JLL, NPM, MGW), very early. Merlin: 24-28 Sep (1) RCI (JRW, MGW, SNK, NPM); 25 Sep (1) PEF (JRW); 12 Oct (1) NW of Garland, TPC (LCC); 13 Oct (1) ESL (JRW). Peregrine Falcon: 11 Aug (1) ESL (JRW); 16 Sep (1) I13 (WGC); 22-28 Sep (1) RCI (JRW, MGW); 3 Oct (1 imm) I13 (SJS).

Crane—Phalarope: SANDHILL CRANE: 15 Oct (7) MEM (Jo L. Levy). Black-bellied Plover: 31 Aug, 7 Sep (1), ESL (JRW, BBC, LCC, MGW); 14 Aug - 12 Oct (1-2) I13 (WGC); 3 Sep (1) PAP (MCT, WT). Lesser Golden-Plover: 14 Sep - 21 Sep (up to 14) I13 (WGC, MTOS); 22 Sep (1) ESL (BBC, LCC). **SNOWY PLOVER:** 9-18 Sep (1) I13 (WGC, SJS, MTOS); second state and first West Tennessee record. Semipalmated Plover: generally increasing to high of 14 on 31 Aug at ESL; 29 Jul - 29 Sep (max 13 on 14 Sep) I13 (WGC, MTOS); 11 Aug (5) I21 (WGC); 14 Sep (1) HEL (WGC). Piping Plover: 14 Aug - 10 Sep (1-3) (SJS, GHS, ARH); 2 Sep (2) PAP (MCT, WT). American Avocet: 1, 2 Sep (12) I13 (SJS, CGD, ARH, JRW, MCT, WT); 21 Sep (1) RCI (JRW, MTOS). Solitary Sandpiper: 13 Jul - 18 Aug (4-17) ESL (BBC, LCC, MGW, JRW). Willet: 2, 9, 10 Aug (1) I13 (WGC, SJS, BHS). Spotted Sandpiper: 29 Nov (1) PEF (JRW). **WHIMBREL:** 11 Aug (1) ESL (DAD, JRW); second Shelby Co. record (first 8 Jul 1934). **LONG-BILLED CURLEW:** 1 Sep (1) I13 (DWB, JRW, DAD); first state record, details to be published. **MARBLED GODWIT:** 3 Aug (1) I13 (SJS, BHS, RCS). Ruddy Turnstone: 6 Aug (1) RCI (MGW, SNK, NPM); 6 Aug - 23 Sep (1-2, except 21 on 21 Sep) I13 (WGC, SJS, BHS, ARH); 12 Sep (3) CDP (JBG); 6, 13 Oct (1) ESL (SNK, NPM, MGW, JRW). Sanderling: 3 Aug - 3 Oct (1-19, max on 23 Sep) I13 (SJS, BHS, ARH, JRW, WGC); 12 Sep (14), 21 Sep (5) CDP (JBG, BBC, LCC); 25 Sep (6) PAP (AHH). Semipalmated Sandpiper: at ESL, decreased from high of 295 on 24 Aug to 15 on 29 Sep (JRW, JEW, RTC, MGW); 2, 12 Oct (2) I13 (WGC). Western Sandpiper: 27 Jul - 29 Sep (2-4) ESL (JRW, MGW, BBC, LCC); 29 Jul - 14 Sep (7-20) I13 (WGC, SJS, BHS,

MTOS); 3 Aug (12), 4 Aug (19) RCI (JRW); 21 Sep (5) CDP (BBC, LCC). Least Sandpiper: 24 Aug - 6 Oct (355 to max of 780 on 6 Oct) ESL (JRW, JEW, MGW). White-rumped Sandpiper: 7 Sep (1) ESL (LCC); 3 Oct (2) I13 (SJS). Baird's Sandpiper: observed 24 Aug (1) thru 14 Sep (5) at ESL and on RCI (JRW, MGW, DAD); 29 Jul - 12 Oct (1-12) I13 (WGC); 21 Sep (4) CDP (BBC, LCC); 27 Sep (1) ESL (JRW). Pectoral Sandpiper: max of 484 on 24 Aug at ESL (JRW), last on 29 Sep (50) ESL (MTOS).Dunlin: 23 Oct (2) PAP (SJS, TJW); 27 Oct (1) ESL (BBC, LCC). Stilt Sandpiper: 3 Aug (9), 24 Aug (3), 7 Sep (23) ESL (JRW); 3 Aug (3), 31 Aug (5) I13 (SJS, BHS, ARH); 14 Sep (24), 6 Oct (2) HEL (WGC). Buff-breasted Sandpiper: 31 Aug (1), 14 Sep (4), 27 Sep (3) I13 (SJS, BHS, MTOS, WGC); 7 Sep (2) ESL (JRW); 14 Sep (2) PAP (AHH, Warioto Aud. Soc.); 21 Sep (1) CDP (BBC, LCC). Short-billed Dowitcher: 6 Aug - 27 Sep (1-4) I13 (WGC); 11 Aug (1) I21 (WGC). Wilson's Phalarope: 17 Aug (3) (SJS, BHS, ARH), 19 Aug (1) I13 (WGC); 7 Sep (2), 6 Oct (1) ESL (JRW, MGW). Red-necked Phalarope: 25 Sep (1) I13 (WGC).

Gull—Jaeger: Laughing Gull: 31 Aug, 3 Sep (2 imm) PAP (Robert R. Reid, Elberta L.Reid, MCT, WT); 6 Oct (1) ESL (JRW); 26 Oct (1) BRF (JCR); 18 Nov (1 imm) PAP (SJS). Franklin's Gull: 5 Oct (3) BRF (JCR). Caspian Tern: 25 Aug (7), 21 Sep (3) RCI (JRW, MGW); 25 Sep (2) I13 (WGC). Forster's Tern: 6 Aug (2) (WGC), 14 Sep (1) I13 (BBC, LCC, MTOS); 21 Sep (1) CDP (BBC, LCC); 14 Oct (7), 23 Oct (6), 19 Nov (3) BRF (AHH, NBH, SJS, TJW, EJW). Least Tern: 25 Aug (5 fledglings) RCI (JRW, MGW). Black Tern: 7 Aug (17), 10 Aug (37), 25 Aug (5 imm) RCI (DAD, JBG, JRW, MGW); 14 Aug - 6 Sep (2-7) I13 (WGC); 24 Aug (14) ESL (JRW). **PARASITIC JAEGER:** 6, 22 Oct (1) PAP (SJS, JCR); first state record; details to be published.

Dove—Grosbeak: Mourning Dove: 25 Sep (285) PEF (JRW), max. Black-billed Cuckoo: 31 Aug (1) REL, LKC (SJS, BHS, ARH). **GROOVE-BILLED ANI:** 20 Sep (1) Dyersburg (WGC); details to be published. Short-eared Owl: 24 Nov (1) PEF (JRW). Red-headed Woodpecker: 27 Oct (58) SFP (MTOS). Olive-sided Flycatcher: 1 Sep (1) Ponderosa, Decatur Co. (CHB); 25 Sep (1) HWR (BBC, LCC). WESTERN KINGBIRD: 14 Sep (1) I13 levee (George R. Payne, Jr., James A. Ferguson, JRW, LCC). Scissor-tailed Flycatcher: 30 Sep (1) Arlington, Shelby Co. (RTC). Red-breasted Nuthatch: 16 Sep (1) N. Dyer Co. (WGC); 16 Sep (1) MEM (WRP); 25 Sep (1) Sunnyhill, HYC (BBC, LCC); 27 Oct (22) SFP (MTOS). Marsh Wren: 17 Oct (1) PEF (WRP). House Wren: 27 Sep (2) PEF (JRW). Solitary Vireo: 9 Oct (1) HWR (HBD); 16 Oct (1) PEF (HBD); 14 Nov (1) PEF (MGW, JRW). Golden-winged Warbler: 25 Sep (1) PEF (JRW). Black-throated Blue Warbler: 27 Oct (2) SFP (SNK, RTC, MTOS). BLACKPOLL WARBLER: 14 Oct (1) PLS (JCR). Prothonotary Warbler: 25 Sep (2) PAP (AHH). Wilson's Warbler: 26 Sep (1) MEM (MGW); 27 Sep (2) PEF (JRW). Scarlet Tanager: 28 Oct (1) MEM (BBC, LCC). Lark Sparrow: 25 Aug (1) ESL (BBC, LCC). LeConte's Sparrow: 25 Oct (1) Martin (T. David Pitts). Lincoln's Sparrow: 27 Sep (1) PEF (JRW). Evening Grosbeak: 27 Oct (4) SFP (MTOS); 29 Nov (10) Carroll Co. (MCT, WT).

Locations: BRF - Britton Ford, Henry Co.; CDP - Cedar Point, Tipton Co.; ESL - Ensley Sewage Lagoons, Shelby Co.; FPP - Fort Pillow State Park, Tipton Co.; HEL - Heloise, Dyer Co.; HWR - Hatchie Nat. Wildl. Refuge, Haywood Co.; HYC - Haywood Co.; I13 - Island 13, Lake Co.; I21 -Island 21, Dyer Co.; LKC - Lake Co.; MEM - Memphis; OBC - Obion Co.; PAP - Pace Point, Henry Co.; PEF - Shelby Co. Penal Farm; PLS - Paris

Landing Start Park, Henry Co.; RCI - Robinson Crusoe Island, Shelby Co.; REL - Reelfoot Lake; SFP - Shelby Forest State Park, Shelby Co.

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CENTRAL PLATEAU AND BASIN REGION—Among the more impressive results of the autumn fieldwork in the region were the discovery of a species new to the state, the occurrence of a species new to the region, the greater than normal observations of species rarely or casually encountered in the region, and the superceding of early and late dates of occurrence for nearly a dozen species in the Nashville Area. The last of these results probably stemmed from the September publication of the fourth edition of Henry Parmer's "Birds of the Nashville Area"; as Morris Williams noted 10 years ago (*Migrant* 47:18, 1976), when the third edition of this work was published, the appearance of an updated list of extreme dates guarantees that a greater effort will be made to supercede them than would normally be the case.

Weather conditions also undoubtedly contributed to the superceding of many late dates in Nashville and to the lingering of many species in the region past their average dates of departure. For the third consecutive year, warm Pacific air from the vicinity of Hawaii was borne into the region by the jet stream during November, resulting in a month which averaged 8°F above normal and making it the third-warmest November on record. The presence of many late-lingering shorebirds and some passerines was at least partly due to November's almost tropical temperatures. Rainfall in August and November was near monthly norms, but that for September and October was more than an inch below normal for each month; thus, for the third consecutive season, dry conditions prevailed. The remnants of three hurricanes—Danny and Elena in August and Juan in late October and early November—passed through the region but had little affect on birdlife, unless the stilt and ground-dove which turned up in Stewart County in early November are attributable to Juan.

The wild food crop in the region was considerably better than average. Mast production was exceptional, with oaks, hickories, and most other nut-bearing trees except beeches producing a bountiful crop. Similar largess occurred among berry-producing trees and shrubs with the exception of dogwood, which experienced a poor season, perhaps because it was more affected by the dry spring and summer than were other berry-producers. Fruit-bearers generally had a poor season, though persimmons were often loaded with fruit. Finally, weed seeds were in evidence everywhere during the fall, especially on one's clothing after a walk through a good sparrow field.

Both the quantity and quality of the reports submitted this season were high. Over 1500 individual records were received, representing over 200 species of birds. Many of these records arrived on the "Unusual Sighting" cards (available free from TWRA) which make compiling the report a simple affair, although a long one; many thanks go to the more than 60 regional fieldworkers who submitted data, especially to those who used these cards. Readers of the following report will note that most of it is devoted to the species which fall between loons and terns, despite the fact that these species represent only 40% of those occurring in the state. This imbalance in species representation can be avoided in future reports if the

many observers who devote time to the woodland birds will report their results as diligently as they pursue these species. If that happens, entries like those for Common Loon, Bald Eagle, and Sandhill Crane below can be written for other species, which now can be allotted only a perfunctory comment, usually having to do with an early or late extreme date. As important as these dates are, they but touch the surface of each species' status in the region.

Loon—Cormorant: Red-throated Loon: 30 Nov (2) WDR (DJS, SJS, BHS, FLB, SAB), 3rd consecutive year at this site. Common Loon: 17 Oct (11) WDR (SJS), ers; 27 Oct (25) DRU (SJS, DJS); 29 Oct (145) WDR (SJS); 2 Nov (8) CCNWR (JCR); 19 Nov (4) FRR (SJS); 24 Nov (18) LHL (DJS, Don K. Simbeck); 27 Nov (50) OHD (SJS); 29 Nov (7) PPL (RVM, MRM); 30 Nov (55) NOL (SJS, DJS *et al.*); 30 Nov (23) Tims Ford L., Franklin Co. (SJS, DJS *et al.*); all but the first of these reports represent the seasonal high for the locale. Pied-billed Grebe: 12 Aug (1) MOP (SJS, BHS), ers. Horned Grebe: 6 Oct (2) LHL (DJS, MAB), ers; 29 Oct (45) WDR (SJS), max. American White Pelican: 26-27 Oct (14) DRU (SJS, DJS, JCR, BHS, DWB *et al.*), only report. Double-crested Cormorant: 10 Aug (1) DRU (SJS, BHS), ers; 14-15 Nov (450+) DRU (CKC, SJS *et al.*), max; the latter record involves one of the largest concentrations reported in the region since the late 1940s (*Migrant* 20:42, 1949).

Bittern—Night-Heron: Least Bittern: 1, 25 Aug (1) MOP (BHS, Kenneth G. Anderson); 25 Aug (1) DRU (SJS, NTOS); 2 Oct (1) MOP (BHS), very late; only reports. American Bittern: 24 Sep (1) CCNWR (DWB), only report. Great Egret: until 24 Oct (up to 19 with 2 present on last date) CCNWR (JCR); 10 Nov (1) OHD (*fide* SJS); until 16 Nov (up to 45 with 8 present on last date) DRU (Margaret L. Mann, m. ob.). Snowy Egret: until 20 Sep (2, with 1 present last date) CCNWR (DWB, SJS, m.ob.), only report; very late departure date. Little Blue Heron: 2 Aug (1 imm) Anne Hettish Bird Sanctuary, RUC (ALH, RVM); until 25 Aug (up to 10) DRU (SJS, BHS, m.ob.); until 25 Aug (4 imm) MOP (BHS); until 22 Sep (1) CCNWR (JCR); 4 Oct (1 ad) Old Hillsboro Rd. at Harpeth R., WMC (BHS), lrs. Cattle Egret: until 17 Aug (up to 5) ROP (DJS); 24 Aug (2) CCNWR (SJS, NTOS); only reports. Green-backed Heron: 19 Oct (1) MOP (PBH, NTOS); 20 Oct (1) CCNWR (DWB), lrs. Black-crowned Night-Heron: until 22 Oct (up to 26 with 3 present on last date) CCNWR (SJS, JCR, m.ob.); through EOP at NASH, where wintering normal.

Goose—Duck: Greater White-fronted Goose: 6, 15 Nov (1) DRU (TJW, SJS), only reports. Snow Goose: 27 Oct (5 blues, later up to 30) DRU (SJS, DJS), ers; by EOP reported from CCNWR (up to 7), NOL (2), and LHL (1). Green-winged Teal: 14 Sep (2) LWP (SJS, TJW), ers. American Black Duck: 15 Sep (3) CCNWR (JCR), ers. Northern Pintail: 25 Sep (8) CCNWR (JCR), ers. Blue-winged Teal: 1 Aug (2) MOP (SJS, BHS), ers. Northern Shoveler: 3 Sep (3) CCP (SJS), ers. Canvasback: 27 Oct (1) DRU (SJS, DJS, JCR, DWB), ers; by EOP (up to 61) FRR (SJS, BHS). Redhead: 12 Oct (1) CCNWR (JCR), ers; very early; 8 Nov (20) CCNWR (JCR) and 29 Nov (20) FRR (SJS), max. Ring-necked Duck: 12 Oct (3) CCNWR (JCR), ers. Lesser Scaup: 24 Oct (5) CCNWR (JCR), ers; 27 Oct (1000+) DRU (SJS, DJS), max. Oldsquaw: 23-28 Nov (3) RDL (Richard Rimmer, SJS, DFV, m.ob.), only report. BLACK SCOTER: 6-10 Nov (1) RDL (BHS, JCR, m.ob.), only report; 4th NA record. White-winged Scoter: 15-16 Nov (1) CCNWR (JCR, DWB),

only report. Surf Scoter: 23 Nov (1) WDR (SJS, BHS), only report. Common Goldeneye: 6 Nov (2) Quarry L., RUC (ALH, J. Robert Hettish), ers. Red-breasted Merganser: 29 Oct (6) WDR (SJS), ers. Ruddy Duck: 1 Oct (1) FRR (SJS), ers; new NA early fall date.

Vulture—Falcon: Black Vulture: 12 Aug (150+) MOP (SJS, BHS); 16 Nov (65) CCSP (JCR); peak numbers for 2 roosts. Turkey Vulture: 20 Nov (300+) Nevell's Bay, LBL (DWB), max. Osprey: 30 reports (3 Aug - 2 Nov) from 9 counties (JCR, DJS, Candace J. McCall, m.ob.). Bald Eagle: late Jul (1 imm) Cordell Hull L., Jackson Co. (Kurt Eichenburger, *fide* James D. Parrish), suggests possible nesting; 4 Aug (1 ad) Center Hill L., Putnam /DeKalb Cos. (Veit Spero, Debbie Spero *et al.*), if not a summering or nesting bird, then a very early returnee for winter; 12, 25 Aug (1 subad) MOP (SJS, BHS, DJS), difficult sighting to analyze; nesting birds summered at DRU and CCNWR, as well as LBL; by EOP birds had returned to winter at the following sites: CCNWR (JCR), DRU (SJS), Dale Hollow L., PIC (RCH), LBL (DWB), NOL (MDH), and WDR (KHD); in late Nov an adult was shot in Macon Co. (*fide* RMH), the first eagle known to have been shot in the state since 1983; TOS might consider joining other organizations in offering a reward for information leading to the arrest and conviction of those who ignorantly or wantonly persist in shooting eagles (or other protected nongame species). Northern Harrier: 2 Sep (1) Bluewater Creek, LWC (DJS), ers; 30 other reports (13 Sep - EOP) from 7 counties, with about 20 of them coming from the national wildlife refuges. Sharp-shinned Hawk: 15 Aug (1) PPL, DVC (RVM, SJS), ers; 20 other reports (16 Sep - EOP) from 9 counties. Cooper's Hawk: 24 Aug (1) CCNWR (SJS, DJS, Ann T. Tarbell, Barbara Harris, m.ob.), ers; 21 other reports (1 Sep - EOP) from 11 counties (also 5 reports of *Accipiter* sp.), a very good season for accipitrine hawks. Broad-winged Hawk: no reports of migrating flocks. Rough-legged Hawk: 3 Nov (1 light phase) CCNWR (JCR), ers; 10 Nov (1) DRU (MCT, WT); 13 Nov (1) Buffalo Springs, LBL (DWB), only reports. Golden Eagle: 6, 14 Nov (1 subad) DRU (TJW, SJS, CKC *et al.*), only reports. Merlin: 23 Oct (1) Love Lady, PIC (RCH); 6 Nov (1) DRU (TJW, SJS); only reports. Peregrine Falcon: 17 Aug (1 imm) LOR (DJS), ers; 3 other reports (1-4 Oct) of imm birds, 2 in DVC (DFV, Sandra D. Bivens, Robert L. Parrish, RMH) and 1 in WMC (SJS).

Rail—Crane: Virginia Rail: 24 Sep (1) CCNWR (DWB); 28 Sep (1) ACI (CGD); 29 Sep (1) MC (CGD *et al.*); only reports. Sora: 3 Aug (1 calling) MOP (O. Bedford Lochridge), ers; 6 other reports (24 Aug - 26 Oct) from DVC, HPC, and SWC; 6 Nov (1) DRU (SJS, TJW), lrs. American Coot: 17 Aug (1) Davy Crockett S. P., LWC (DJS, MAB), ers; highs of 1200 and 550 noted at WDR (SJS) and Obey R. Park, PIC (RCH), respectively. Sandhill Crane: 29 Oct (76) Dilton-Mankin Rd., RUC (Wilma J. Hunter, Richard E. Hunter, *fide* ALH), ers; new NA early fall date, and 2nd-highest number ever reported in NA; 30 Oct (84) Tullahoma, CFC (Chloe and Howell Peebles, *fide* PLM); 30 Oct - 3 Nov (up to 10) Goose Pond, Grundy Co., and vicinity (*fide* PLM, KHD); 3 Nov (9) CCNWR (JCR), west of usual migration corridor; 8 Nov (150) w of Byrdstown, PIC (Eugene Wells, *fide* RCH), max; 22 Nov (3) 4 mi w of Obey R. Park, PIC (RCH), lrs; a good season for cranes.

Plover—Phalarope: Black-bellied Plover: 7 reports (17 Aug - 3 Nov) from HPC, LWC, SUC and SWC. Lesser Golden-Plover: 6 reports (20 Sep - 3

Nov) also from HPC, LWC, SUC and SWC. Semipalmated Plover: 22 Jun (1) DRU (SJS, BHS, LDR), ers, remarkably early, if not a remarkably late spring migrant; 7 Aug (18) GSP (JPC, RCS, SJS), max; 16 Oct (2) CCNWR (JCR), lrs. Piping Plover: 28-29 Jul (1) GSP (SJS, JPC *et al.*), ers and new NA early fall date; 2 Oct (1) OHD (SJS), lrs. **BLACK-NECKED STILT:** 2-4 Nov (1) CCSP (JCR *et al.*), first regional record; it is tempting to speculate that this bird was a hurricane-borne vagrant, as its appearance followed hard upon the heels of Hurricane Juan, whose remnants brushed through the region in late October and early November. American Avocet: 20-21 Jul (2) CCNWR (CKC *et al.*); 21 Sep (1) CCNWR (Donna Smith, Roy Jensen, Charles Ralph, Red River TOS); only reports. Greater Yellowlegs: 22 Jun (1) ROP (DJS, MAB, G. Ned Piper), ers; 3 Nov (24) CCNWR (JCR), max; 18 Nov (2) CCNWR (JCR), lrs. Lesser Yellowlegs: 22 Jun (32) DRU (SJS, BHS, LDR), ers; 23 Jun (1) LWP (DTC, JPC), new NA early fall date; 7 Aug (88) GSP (JPC, RCS, SJS), max; 27 Oct (1/5) CCNWR/LWP (JCR/DTC, JPC), lrs. Solitary Sandpiper: 6 Jul (1) DRU (SJS, BHS, DFV), ers; 2 Aug (13) CCP (SJS), max; 25 Sep (2) CCP (SJS), lrs. Willet: 22 Jun (2) DRU (SJS, BHS, LDR), ers, remarkably early; 4 other reports (7-28 Aug) from SUC, SWC, WMC. Spotted Sandpiper: 9 Aug (15) CCNWR (DWB), max; 25 Oct (1) WDR (SJS), lrs. Upland Sandpiper: 25 Aug (5+) DRU (CGD, NTOS), only report. MARBLED GODWIT: 2-4 Aug (1) CCNWR (DWB *et al.*), a rarity in the region. Sanderling: 9 Jul (1) LWP (DTC, JPC), ers and new NA early fall date; 29 Jul (8) ROP (DJS), new LWC species; 13 Oct (1) GSP (DTC, JPC), lrs. Semipalmated Sandpiper: 22 Jun (2) DRU (SJS, BHS, LDR), ers; 2 Oct (1) OHD (SJS), lrs. Western Sandpiper: 4 Jul (2) GSP (DTC, JPC, David Chaffin), ers and new NA early fall date; 11 other reports (22 Jul - 9 Sep) from HPC, SUC, SWC and WMC. Least Sandpiper: 9 Jul - 10 Nov (numerous reports). White-rumped Sandpiper: 17 Aug (1) GSP (CKC, DTC, JPC); 14 Sep (1) LWP (SJS); only reports; however, even 2 reports are quite a few of this shorebird in fall. Baird's Sandpiper: 15 Jul (2) ROP (DJS), ers; 5 reports 14 Aug - 14 Sep; 3 Nov (1) GSP (DTC, JPC), lrs and new NA late fall date. Pectoral Sandpiper: 22 Jun (1) DRU (SJS, BHS, LDR), ers; 7 Aug (130) GSP (SJS, JPC, RCS), max and new NA record for highest number; 27 Oct (2) LWP (DTC, JPC), lrs. Dunlin: 12 Oct (3) CCSP (JCR), ers; 22 Oct (29) LWP (DTC, JPC), max. Stilt Sandpiper: 6 Jul (2) DRU (SJS, BHS, DFV), ers; 19 Oct (4) CCNWR (DWB), late; 20 Oct (1) LWP (DTC, JPC), lrs and new NA fall late date. Buff-breasted Sandpiper: 20-21 Sep (1) LWP (DTC, JPC, Richard Newton), only report. Dowitcher sp.: 6 Jul (2) DRU (SJS, BHS, DFV), ers; 27 Jul (32) DRU (SJS, BHS, Anne Nixon, Robert Nixon), max; 23 Nov (1) s of Murfreesboro, RUC (RVM, MRM), lrs and new NA late fall date; reports of 2 Short-billed Dowitchers were received: 25 Jul (1 calling) ROP (DJS) and 27 Oct (1 juv with wide white tailbars and scapulars broadly edged with buff) GSP (DTC, JPC); 1 Long-billed Dowitcher was reported: 29 Jul (1 calling) ROP (DJS); observers are cautioned that the calls of these 2 species probably overlap somewhat and are not an entirely reliable index of identification. Wilson's Phalarope: 14 Aug (1) LWP (SJS, JPC, RCS); 17 Aug (4) GSP (JPC, DTC, CKC); only reports.

Gull—Tern: Laughing Gull: 15 Aug (1) FSM (SJS), only report. Ring-billed Gull: 23 Jul (1) OHD (SJS), summering likely, rather than an early winter returnee; 28-29 Nov (9) LOR (DJS), few LWC records. Caspian Tern: 11 Aug (4) GSP (DTC, JPC), ers; 2 Oct (10) OHD (SJS), max; 5 Oct (1)

CCNWR (JCR), lrs. Common Tern: 13 Oct (2) LHL (DJS, MAB), the primaries of these birds were seen in direct comparison with those of Forster's Terns, but color of tail and presence/absence of carpal bar were not noted (the amount of black on the nape of this species is not a reliable field mark until later in the season). Forster's Tern: 27 Jul (2) FSM (RVM, MRM); 13 Oct (12) LHL (DJS, MAB), max; 15 Nov (4) DRU (SJS), lrs. LEAST TERN: 7 Aug (2), 15 Aug (1) GSP (SJS, JPC, RCS *et al.*), only reports and 11th and 12th NA records. Black Tern: 26 Jul (8) FSM (RVM, MRM), ers; 28 Sep (2) RDL (Mary Anne Guschke, Jan C. Alexander), lrs, within 1 day of NA late fall date.

Ground-Dove—Swallow: **COMMON GROUND-DOVE:** 3 Nov (1) CCNWR (JCR), about 6th state record; also possibly a product of Hurricane Juan's passage. Yellow-billed Cuckoo: 8 Nov (1) CCNWR (JCR), lrs. Common Barn-Owl: 6 Sep (1) CLA (DWB); 1 Oct (1) Murfreesboro (TJW); 1 Oct (1) Moran Rd., WMC (CKC); only reports. Common Nighthawk: 31 Oct (1) NASH (DWB), lrs; undocumented reports from Nov were bandied about by some. Whip-poor-will: 13 Oct (1 calling) Dover, SWC (DWB), lrs. Chimney Swift: 28 Oct (1) Green Hills, NASH (BHS), lrs. Ruby-throated Hummingbird: 23 Oct (1) Franklin Rd., NASH (Ann Nichols), lrs. Yellow-bellied Sapsucker: 28 Sep (1) LBL (DWB, JCR), ers. Olive-sided Flycatcher: 18 Sep (1) CCNWR (JCR), only report. Eastern Wood-Pewee: 13 Oct (1) FTD (JCR), lrs. Acadian Flycatcher: 28 Sep (1 singing) LEF (SJS), lrs. **SAY'S PHOEBE:** 29 Sep (1, photos) MC (Dan Jacobson, CGD, m.ob.), first definitive state record, though a bird of this species was reported with very belated documentation from RDL on 27 and 30 Sep 1984 (CGD, CKC). Eastern Kingbird: 12 Aug (65) MOP (SJS, BHS), max; 30 Sep (1) CCNWR (JCR), lrs. Scissor-tailed Flycatcher: 17 Aug (1) Thompson Lane, RUC (TJW), only report. Tree Swallow: 3 Nov (4/50) CCNWR/WDR (JCR/SJS, BHS), lrs. Barn Swallow: 3 Nov (2) WDR (SJS, BHS), lrs.

Nuthatch—Chat: Red-breasted Nuthatch: 12 Sep (1) RDL (SJS), ers; invasion winter underway with many sightings region-wide by EOP, making this the first fall since 1981 that the species occurred in numbers in the region. Brown Creeper: 29 Sep (1) FTD (JCR), ers. Bewick's Wren: 29 Sep (1) Cheatham Dam (Camille Crenshaw, Maxey Irwin); 12 Oct (1) s Wilson Co. (RVM *et al.*); 10 Nov (1) Anchor Dr., Old Hickory L., SUC (*fide* CKC); only reports. House Wren: 30 Nov (1) NOL (SJS, BHS, DJS, FLB, SAB), lrs. Marsh Wren: 7 reports (2 Oct - 3 Nov) from HPC, LWC, RUC, SWC and Maury Co. Sedge Wren: 24 Jul (3 singing) CCNWR (SJS), ers; 25 Aug (7) DRU (SJS, NTOS), max; 27 Oct (1) DRU (JCR), lrs. Golden-crowned Kinglet: 6 Oct (1) FTD (JCR), ers. Ruby-crowned Kinglet: 27 Sep (1) CLA (AHH), ers. Blue-gray Gnatcatcher: 8 Oct (1) CLA (AHH), lrs. Swainson's Thrush: 9 Sep (12+) BAH (RWS), ers. Gray Catbird: 23 Nov (1) Wiley's Spring, LBL (DWB), lrs. Water Pipit: 20 Oct (20+) CCNWR (DWB), ers. White-eyed Vireo: 29 Oct (1) Tullahoma, CFC (MDH), lrs. Solitary Vireo: 23 Nov (1) WDR (SJS, BHS), lrs. Warbling Vireo: 17 Sep (1) CLA (AHH), lrs. Orange-crowned Warbler: 4 reports (10-27 Oct) from CHC, HPC, LWC and Montgomery Co. Yellow Warbler: 26 Sep (1) CLA (AHH), lrs. Chestnut-sided Warbler: 28 Aug (1) CLA (AHH), ers. Cape May Warbler: 22 Sep (1) RDL (*fide* CKC); 4 Oct (1 casualty) MTSU (Patrick J. Doyle); only reports. Yellow-rumped Warbler: 25 Sep (1/3) RDL/LBL (SJS *et al.*/DWB), ers. Black-and-white Warbler: 22 Oct (1) Tullahoma, CFC (MDH), lrs. Ovenbird: 13 Oct (1) Love Circle, NASH (David L. Alexander), lrs. Connecticut

Warbler: 15 Oct (1) LBL (DWB), only report. Common Yellowthroat: 29 Nov (1) Edwin Warner Park, DVC (DFV), lrs and new NA late fall date, but species winters occasionally. Canada Warbler: 22 Aug (1) 17th St., NASH (M. Patricia Stallings), ers. Yellow-breasted Chat: 1 Oct (1) BAH (RWS), lrs.

Grosbeak—Grosbeak: Rose-breasted Grosbeak: 19 Oct (1) MOP (PBH, NTOS), lrs. Blue Grosbeak: 2 Oct (1) CCNWR (DWB), lrs. Dickcissel: 16 Oct (1/1) MTSU/Pardue's Pond, Dickson Co. (Patrick J. Doyle/SJS), lrs. Chipping Sparrow: 12 Nov (1) CLA (AHH), lrs. Vesper Sparrow: 2 Oct (1) CCNWR (DWB), ers. Savannah Sparrow: 21 Sep (3) LWP (DTC, JPC), ers. SHARP-TAILED SPARROW: 29-30 Sep (1) MC (CGD, m.ob.), 8th NA record; 1-2 Oct (1) CCNWR (JCR, DWB), first regional reports in several years; the former bird was found in a dry lakebed which had grown up thickly with smartweed, while the latter favored a field dominated by foxtail grass. Fox Sparrow: 10 Oct (1) Hudgin's Slough, CHC (SJS), ers. Swamp Sparrow: 27 Sep (1) MC (SJS), ers. White-throated Sparrow: 13 Oct (1) LOR (DJS), ers. White-crowned Sparrow: 19 Oct (4/1) CCNWR/Hillsboro, CFC (DWB/Erma L. Rogers), ers. Dark-eyed Junco: 28 Sep (4) ACI (CGD *et al.*), ers. Lapland Longspur: 3-16 Nov (up to 4) CCNWR (JCR *et al.*); 28 Nov (1) LOR (DJS); only reports, with the first quite early. Bobolink: 24 Aug (1) CCNWR (SJS, MCT, NTOS), ers; 25 Aug (10) DRU (SJS, NTOS), max; 2 Oct (1) CCNWR (DWB), lrs. Orchard Oriole: 17 Aug (8) Liberty Grove, LWC (DJS), max; 29 Sep (1) Percy Warner Park, DVC (DFV), lrs and new NA late fall date. Purple Finch: 2 Oct (1) CCNWR (JCR), ers; widespread and abundant by EOP. House Finch: substantial numbers by EOP, with most birds arriving in Nov. Pine Siskin: groups of 2-5 birds noted in Oct and Nov, but no large numbers by EOP. Evening Grosbeak: 26 Oct (10+) Byrdstown, PIC (RCH), ers; widespread and fairly numerous by EOP (e.g., up to 50 at LEF).

Locations: ACI - Ashland City, Cheatham Co.; BAH - Barnes Hollow, Putnam Co.; CCNWR - Cross Creeks National Wildlife Refuge, Stewart Co.; CCP - Carter's Creek Pike ponds, 8-10 km S of Franklin, Williamson Co.; CCSP - Cumberland City Steam Plant, Stewart Co.; CFC - Coffee Co.; CHC - Cheatham Co.; CLA - Clarksville, Montgomery Co.; DRU - Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co.; DVC - Davidson Co.; FRR - Franklin Reservoir, Williamson Co.; FSM - Fate Sanders Marina, Percy Priest Lake, Rutherford Co.; FTD - Fort Donelson Military Park, Stewart Co.; GSP - Gallatin Steam Plant, Sumner Co.; HPC -Humphreys Co.; LBL - Land Between the Lakes, Stewart Co.; LEF - Leiper's Fork, Williamson Co.; LHL - Laurel Hill Lake, Lawrence Co.; LOR -Loretto, Lawrence Co.; LWC - Lawrence Co.; LWP - Lewis Pond, Sumner Co.; MC - Metro Center, Davidson Co. MOP - Monsanto Ponds, Maury Co.; MTSU - Middle Tenn. State Univ., Rutherford Co.; NA - Nashville Area (includes all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, and Wilson Cos., as well as parts of Dickson and Trousdale Cos.); NASH - Nashville; NOL - Normandy Lake, Coffee Co.; OHD - Old Hickory Dam, Davidson.; PIC - Pickett Co.; PPL - Percy Priest Lake, in Davidson, Rutherford and Wilson Cos.; RDL - Radnor Lake State Natural Area, Davidson Co.; ROP - Robertson Pond, Lawrence Co.; RUC -Rutherford Co.; SUC - Sumner Co.; SWC - Stewart Co.; WDR - Woods Reservoir, Franklin Co.; WMC - Williamson Co.

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EASTERN RIDGE AND VALLEY REGION—The weather picture in the Johnson City area was very dry and mild for the period. Their November rainfall total was only the second month in the year it was above average. On 7 November they had their first killing frost which was almost four weeks later than normal. Glen Eller considered the fall warbler movement there normal with the warm weather probably the contributing factor for some lingering species. Waterfowl movement in the Johnson City area was above average with a big push during the period of 17-26 November. Sparrows in their area were somewhat later than usual in arriving and they seemed down in numbers. Winter finches started showing up there during the middle of October and it looks like they will have good numbers for the winter.

Temperatures during the early part of the season at Knoxville were near average, and above average during the latter part of the season. The month of November was one of the warmest on record, with temperatures 8-10°F above normal. The first heavy frost was on 8 November, and there were few other frosts before the end of the month. There were no strong cold fronts passing through in September or early October, and thus few good waves of migrant passerines. The shorebird migration at the Eagle Bend Fish Hatchery was very good, and shorebird numbers at the Kingston Steam Plant were improved over last year. An especially large concentration of shorebirds (over 400 birds) was observed at Eagle Bend in early August during several days of overcast and rainy weather. There was a good movement of waterfowl through the Knoxville area in late October and early November, but numbers were lower there at the end of the season. An impressive flock of 516 waterfowl was reported on Fort Loudoun Lake on 22 November.

At Chattanooga the months of August and September were somewhat cooler than normal while October and November were warmer than usual. August was wetter, September dryer, while October was 1.91 inches over in rainfall and November was slightly under in average precipitation. All of the above conditions probably had an effect on the avian populations, but most bird numbers were not closely monitored in the Chattanooga region. One action that caused close monitoring by local observers was the result of TVA's dropping the water level 3.8 feet in Chickamauga Lake for the period of 26 July to 8 August. The purpose was for control of water weeds in about 5000 acres of shallows. The concept was first tried on Guntersville Lake, Alabama, in 1983, and this was an initial effort on Chickamauga Lake.

Daily surveys were initiated in the Savannah Bay area as well as the easily observed areas of Gunstocker, Sugar, Candies and South Mouse Creeks along the Hiwassee River in Meigs and Bradley Counties. This very short period of time certainly did not attract impressive numbers of wandering herons or migrating shorebirds, but interesting sightings were made. In addition to the usually expected species array were the area's first record of a Wood Stork and observations of up to 3 Laughing Gulls.

Rick Knight and Charles Nicholson both operated their banding stations for the sixth consecutive year, at Austin Springs and Norris, respectively. Knight banded 26 days from 6 September to 17 October for a total of 346 net/hours. Since he ceased operations about 3 weeks early this year this accounted for most of his below average figures of net/hours, birds per

net/hour and total number of birds banded. His top ten species banded were Song Sparrow (107), Common Yellowthroat (30), Indigo Bunting (28), Palm Warbler (27), Swamp Sparrow (21), Gray Catbird (18), American Goldfinch (18), Yellow-rumped Warbler (10), "Traill's" Flycatcher (8), Magnolia Warbler (8). Nicholson operated his Norris station from 11 August to 10 November, and banded 608 birds of 58 species in 698 net/hours, the lowest capture rate ever. The best single day was 29 September, when 74 birds were banded, his best day ever. This was a clear day following a weak cold front. The Knox County fall count was held on the same day, and it was unexceptional.

There is a wealth of information in the body of this report including these few highlights: up to 400 Blue-winged Teal feeding in the water weeds at Savannah Bay; impressive numbers of Black and Turkey Vultures at New Hope in Marion County; a Peregrine Falcon feeding on Rock Doves at Nickajack Lake and dam for 3 weeks, and a first ever Black-necked Stilt at the Eagle Bend Fish Hatchery.

Loon—Stork: Red-throated Loon: 8 Nov (1) BOL (CFW, SG, MD). Common Loon: 9 Sep (1) WBL (TEB); 25 Oct - 30 Nov (4-42) BOL (RLK); max 17 Nov (41) CHL (CDB); max 22 Nov (34) FLL (PSP); 26 Nov (55+) CRL (SJS); 24 Nov (3) NIL (RAR). Pied-billed Grebe: 1, 15 Aug (1) NIL (AMJ); 2, 26 Aug (1) SAB (KHD, LHD); max 17 Nov (60) CHL (KHD, LHD); 21 Nov (21) NIL (RAR). Horned Grebe: 25 Oct (6) BOL (RLK); 10 Nov CHL (BHS, JCR *et al.*); 30 Nov (30) NIL (LHD, DCC). American White Pelican: 30 Nov (1) NIL (JSL). Double-crested Cormorant: 27 Aug (1) CHL (WKJ); 18 Sep (1) AUS (RLK); 24 Sep (6) HRA (CPN, JLC); 4 Oct (4) Tellico L. (ABS); 14 Oct (1) flying upriver below Norris Dam (CPN); 21 Oct (10) CHL (Carl E. Adams); 27 Oct (1) Knox Co. (MLD); 17 Nov (1) BOL (RLK); 17-30 Nov (2-5) CHL (RAR, LHD *et al.*); 23-25 Nov (1-5) FLL (PSP); 24 Nov (2) NIL (RAR). Great Blue Heron: regular DOL, max 12 Oct (143) (JAK). Great Egret: 1-15 Aug (2) EBF (LJF, CPN); 1 Aug - 6 Oct, 27-30 Nov (1-3) SAB (KHD, LHD); 1 Aug - 13 Oct (1-30) HRA (RAR *et al.*); 3 aug - 14 Sep (4-10) CRL (RLK); 4 Aug - 21 Sep (1-5 sporadic) DOL (JAK); 13 Aug - 6 Sep, 8-10 Oct (1) AUS (LHTOS); 17 Oct (1) Douglas Dam (PDH); 29 Oct - 30 Nov (1-2) Melton Hill L. (JMC, BRC); 22 Nov (1) FLL (PSP); 24 Nov (1) Louisville (ARH *et al.*). Snowy Egret: 1 Aug - 6 Sep (2 imm) EBF (LJF, CPN); 10 Aug (1 ad) HRA (JTP). Little Blue Heron: 1-21 Aug (2) EBF (LJF, CPN); 1-10 Aug (1-3) SAB (KHD, LHD); 2 Aug - 2 Sep (2-17) HRA (RAR *et al.*). Cattle Egret: 1-15 Aug (1) EBF (LJF); 8-31 Aug (1-6 irregular) HRA (AMJ, EMR *et al.*). Green-backed Heron: max 4 Aug (55) HRA (KHD, LHD). Black-crowned Night-Heron: regular CRL, max 3 Aug (87+) (RLK). Yellow-crowned Night-Heron: 1-31 Aug (1-8) HRA (LHD, DCC *et al.*); 9 Aug (1) AUS (RLK). White Ibis: 17-24 Aug (2-3) HRA (AMJ, EMR). **WOOD STORK:** 7-8 Aug (1) S. Mouse Cr., HRA, BYC (Graham N. Means, LHD, SJS); on 23 Aug, injured stork found in Polk Co., died the same day (J. Craig Watson); presumably the same bird.

Waterfowl: Tundra Swan: 9 Nov (1) HRA (LHD *et al.*); 20-26 Nov (1) SLC (EHS *et al.*). Greater White-fronted Goose: 9-17 Nov (6) HRA (SJS, BHS, CDB *et al.*); 24 Nov (1) HRA (KHD, LHD). Snow Goose: Oct 29 - 17 Nov (1 blue phase) HRA (TWRA, KHD, LHD); 9 Nov (1 blue) KSP (ARH *et al.*). Canada Goose: in the Johnson City area 2-4 flocks of 8-22 birds were noted every month except Oct (LHTOS); 29 Oct (378), 12 Nov (374) CHL,

HRA (TWRA) - these figures are part of the official waterfowl counts and demonstrate the geese are not coming this far south anymore. Green-winged Teal: 3 Aug (4) SAB (LHD); 19 Aug (1) EBF (CPN); 24 Aug (2) HRA (AMJ, EMR); 6 Sep (2) SAB (KHD); 27 Oct (137) DOL (JAK); max 18 Nov (460) HRA (KHD, LHD). American Black Duck: first 12 Oct (12) HRA (RAR); max 12 Nov (302) CHL, HRA (TWRA). Mallard: max 29 Oct (845) CHL, HRA (TWRA). Northern Pintail: 24 Sep (2) EBF (LJF); 7 Oct (5) HRA (KHD, LHD); 27 Oct (4) DOL (JAK); max 24 Nov (80) HRA (KHD, LHD). Blue-winged Teal: 10 Aug (8) HRA (CTOS); 31 Aug - 12 Sep (160-400) SAB (KHD, LHD); limited sightings in Johnson City area 11 Sep - 4 Oct (LHTOS); 29 Oct (87) CHL (TWRA); 12 Nov (14) CHL, HRA (TWRA). Northern Shoveler: 8 Aug (1) HRA (PDR); 11 Aug (1) KSP (CPN); 18 Aug (2) KSP (KHD, LHD, CPN); 10 Sep (1) SAB (LHD). Gadwall: 14 Sep (2) KSP (SJS); max 29 Oct (952) CHL, HRA (TWRA). American Wigeon: 30 Sep (2) KSP (KHD, LHD); 25 Oct (2) BOL (RLK); max 29 Oct (211) CHL, HRA (TWRA). Canvasback: 30 Nov (3) CHL (LHD, DCC). Redhead: 10-30 Nov (1-8) CHL (CTOS); 17 Nov (15) BOL (RLK). Ring-necked Duck: 7 Oct (50) HRA (KHD, LHD); 17 Nov (350) CHL (KHD, LHD); 4 Nov (500) SAB (KHD, LHD). Greater Scaup: 10-30 Nov (2-95) CHL (KHD, LHD *et al.*). Lesser Scaup: 9 Nov (1) HRA (KHD, LHD); 10-30 Nov (14-430) CHL (KHD, LHD). Scaup sp.: 22 Nov (350) FLL (PSP). Surf Scoter: 24 Nov (1) CHL (LHD). White-winged Scoter: 10 Nov (1) CHL (SJS, BHS, JCR *et al.*); 17 Nov (2) CHL (KHD, LHD); 19 Nov (1) FCF (PBH). Common Goldeneye: 24 Nov (6) NIL (RAR). Bufflehead: 24 Nov (4) NIL (RAR). Hooded Merganser: 15 Aug (1) NIL (AMJ); 15 Nov (2) BOL (RLK); max 18 Nov (180) HRA (KHD, LHD). Common Merganser: 17 Nov (3) NIL (KHD, LHD); 17 Nov (22) Ocoee L. (Gilda Lyon). Red-breasted Merganser: 3 Aug (1) Anderson Co. (CDB); 17 Nov (10) BOL (RLK); 18 Nov (28) FCF (PBH); 21 Nov (61) BOL (RLK *et al.*); 24 Nov (5) NIL (RAR). Ruddy Duck: 25 Oct - 26 Nov (3 reports, 1-8) BOL (RLK); 17-30 Nov (25-51) CHL (KHD, LHD).

Vulture—Crane: Black Vulture: not sighted regularly in Johnson City area, so the 3-8 after 1 Oct are of interest (LHTOS); 24 Nov (300+) New Hope, MAC (RAR, PCH *et al.*). Turkey Vulture: 24 Nov (250) New Hope, MAC (RAR, PCH *et al.*). Osprey: 7, 21 Sep (1) DOL (JAK); up to 3 through Aug at KSP (ARH *et al.*); 8 Sep - 25 Oct (1+) AUS (LHTOS). Bald Eagle: 10 Aug (1 imm) DOL (JAK). Merlin: 21 Aug (1) EBF (LJF); 8 Oct (1) AUS (RLK); 21 Oct (1) Speedwell (GWM). Peregrine Falcon: 10-30 Nov (1 imm) NIL (SJS, BHS, JCR, KHD, LHD, RJH, PDR, PCH, AMJ, JSL, Rick Waldrop) - this is the longest period any Peregrine has been reported in the state since they nested here in the 1940's! Ruffed Grouse: 1 Oct - 7 Dec, 38 trapped on Bays Mountain near Kingsport for restocking effort in Middle Tennessee (RLK, TWRA). Virginia Rail: 9 Nov (1) HRA (SJS, CDB). American Coot: regular, max 12 Nov (6492) CHL, HRA (TWRA). **SANDHILL CRANE:** Jul - 24 Sep (1) farm pond in Loudon Co. (*fide* J. B. Owen), photographed and videotaped; 8 Nov (1) NRL (JCH); 17 Oct - 25 Nov - 10 reports of 271 birds from BYC, Franklin, Hamilton & Meigs Cos. (CTOS).

Plover—Phalarope: Black-bellied Plover: 3 Aug (1) KSP (CDB). Lesser Golden-Plover: 16 Sep (3) KSP (KHD, LHD); 13 Sep (3), 19 Sep (2) EBF (LJF); 9 Nov (3) HRA (KHD, LHD *et al.*). Semipalmated Plover: regular, max 6 Aug (9) EBF (LJF); 3 Aug (1) SAB (KHD, LHD); 6-8 Aug HRA (AMJ, EMR, SJS *et al.*); 2 Sep (2) DOL (JAK); 16 Sep (3) KSP (KHD, LHD); 26 Sep (1) AUS (RLK). Piping Plover: 6 Aug (1) EBF (JMC, BRC, LJF). Killdeer:

max 18 Nov (418) HRA (KHD, LHD); max 25 Nov (317) SAB (KHD, LHD). **BLACK-NECKED STILT:** 1 Aug (1 ad male) EBF (LJF, CPN), photographed, details in *Migrant* 57:??, 1986; first state record outside of Shelby Co. Greater Yellowlegs: poor flight recorded at AUS with last date 29 Nov (RLK), latest area record by 2 weeks; 2-6 Aug (1-3), 4 Nov (2) SAB (KHD, LHD); 7 Aug (3) HRA (RAR); 15 Sep (1) KSP (LJF, TEB); 30 Nov (1) HRA (KHD, LHD). Lesser Yellowlegs: 2-6 Aug (8-16), 4 Nov (1) SAB (KHD, LHD); 10 Aug (3) HRA (RAR); 12 Aug (1) CRL (RLK); 27 Oct (62) DOL (JAK). Willet: 6-8 Aug (1-8) HRA (AMJ, EMR, RAR *et al.*); 7-13 Aug (1) KSP (ARH, RDH, CDB *et al.*); 8, 14, 16 Sep (1) KSP (KHD, LHD, SJS). Upland Sandpiper: 15 Sep (2) DOL (JAK). WHIMBREL: 10-13 Aug (1) KSP (PDH, Burt Jones, CDB *et al.*). Ruddy Turnstone: 6 Aug (1) EBF (LJF); 25 Aug (1) KSP (JMC, BRC, ABS). Red Knot: 5 Oct (1) KSP (KHD). Sanderling: 4 Aug - 8 Oct (1-2) KSP (m.ob.); 21 Aug (1) EBF (LJF). Semipalmated Sandpiper: 2-6 Aug (1-112) SAB (KHD, LHD); 6-7 Aug (16-60) HRA (KHD, JSL, RAR); 2-7 Sep (1-36) DOL (JAK); 8 Sep (25) KSP (KHD, LHD); 14 Sep (3) KSP (SJS). Western Sandpiper: 4 Aug - 14 Sep (1-6) KSP (JAK, CPN *et al.*); 6-7 Aug (2-15) HRA (AMJ, EMR, RAR); 27 Oct (4) DOL (JAK). Least Sandpiper: 2-6 Aug (2-4) SAB (KHD, LHD); 3-11 Aug (1-37) HRA (AMJ, EMR *et al.*); 14 Sep (15) KSP (SJS); 13 Oct (10) HRA (LHD, DCC); 27 Oct (2) DOL (JAK). Peep sp.: max 6 Aug (326) EBF (LJF). Baird's Sandpiper: 11 Aug -15 Sep (1-2 occasional) KSP (ARH, CPN, SJS). Pectoral Sandpiper: 2-6 Aug (20-60) SAB (KHD, LHD); 3-31 Aug (3-70+) HRA (m.ob.); 9 Aug - 8 Oct (1-5) AUS (LHTOS); 2 Sep (26) DOL (JAK); 4 Nov (4) SAB (KHD, LHD); 9 Nov (3) HRA (m.ob.). Dunlin: first 12 Oct (1) SAB (KHD, LHD); 23 Nov (28) DOL (JAK); max 100 HRA (LHD). Stilt Sandpiper: 4-7 Aug (1-7) HRA (AMJ, RAR *et al.*); 8 Sep (1) KSP (KHD, LHD). Short-billed Dowitcher: 2 Aug (3) SAB (KHD, LHD); 6 Aug (10) HRA (LHD, JSL, AMJ, EMR); 18 Aug (1 by call) KSP (CPN, KHD, LHD); 3 Sep (3) KSP (KHD, LHD). Long-billed Dowitcher: 4-6 Aug (1) SAB (CDB, LHD). Dowitcher sp.: 7 Sep (18) DOL (JAK). Common Snipe: first 12 Oct (15) SAB (LHD). American Woodcock: 9 Nov (2) HRA (PDR). Wilson's Phalarope: 3-6 Aug (1-4) HRA (LHD, AMJ *et al.*); 23 Aug (1) SAB (KHD, LHD); 24 Aug (11) HRA (JTP, RJH, PCH *et al.*). **RED PHALAROPE:** 1 Nov (1) FCF (KHD, LHD *et al.*).

Gull—Horned Lark: Laughing Gull: 7-9 Aug (1-3 imm) HRA (KHD, LHD, SJS, JTP, CDB, RAR, RJH, DCC, CRH); 15 Aug (5 imm) NIL (AMJ *et al.*). Bonaparte's Gull: 9 Nov (1) HRA (m.ob.); 23 Nov (1) BOL (MD, SG); 30 Nov (1) CHL (LHD, DCC). Caspian Tern: 3 Sep (1) KSP (LJF, TEB *et al.*). Common Tern: 16 Aug (1) SAB (LHD); 17 Aug (1) HRA (AMJ). Forster's Tern: 6 Aug (2) HRA (AMJ, EMR); 8 Aug (1) SAB (LHD). Least Tern: 15 Aug (1 ad) S. Mouse Creek, HRA, BYC (CRH, DCC); 17 Aug (1) HRA (AMJ). Black Tern: 6-8 Aug (15-55) HRA (AMJ, LHD, SJS); 15-16 Aug (4-6) SAB (LHD); 17 Aug (9) HRA (AMJ); 29 Aug (2) SAB (LHD). Common Barn-Owl: 10 Sep (1) Armstrong Bend, Meigs Co. (CPN, JLC); 28 Sep (1) AUS (RLK); 24 Oct (1) NRL (JCH). Whip-poor-will: 20 Sep (1 singing) NRL (JCH). Chimney Swift: max 5 Oct (2550) CHA (RAR); last 19 Oct (275) CHA (RAR). Red-headed Woodpecker: 25 Oct (4) CHA (RAR), reappearance of wintering group. Eastern Kingbird: 31 Aug - 2 Sep (30 feeding in flock) HRA (KHD, LHD, Angela C. Davis). Scissor-tailed Flycatcher: 17-31 Aug (1) HRA (KHD, LHD, DCC, AMJ, RAR, PCH), same location as 1983 and 1984 reports. Horned Lark: 24 Nov (40+) Jonesborough (RLK).

Swallow—Shrike: Tree Swallow: 6 Aug (25) HRA (LHD, JSL); 6-22 Oct

(5-11 sporadic), 4 Nov (31) SAB (KHD, LHD); 2 Nov (14) FCF (m.ob.). Red-breasted Nuthatch: it appears this will be a banner year as the birds were widely distributed at the end of Nov.: first dates: 8 Sep (1) KNX (JCH); 15 Sep (2 scattered) Signal Mountain (KHD, RAR); 3 Oct (1) JNC (HHD). House Wren: 29 Sep (1) SAB (KHD, LHD); 11 Nov (1) SLC (RLK). Sedge Wren: none found during Aug at traditional SAB location (KHD, LHD); 9 Nov (1) HRA (CRH, DCC). Marsh Wren: 10 Aug (1) HRA (KHD, LHD); 16, 18 Sep, 16 Oct (1) AUS (RLK); 9 Nov (1) HRA (CDB). Veery: 27 Aug - 22 Sep (8 banded) NOR (CPN), good numbers. Gray-cheeked Thrush: 27 Aug (1 window kill) Tennessee River Gorge (Barbara T. Clairborne, KHD); only 3 records from JNC area (LHTOS); 29 banded at NOR between 15 Sep - 13 Oct, higher than average numbers (CPN). Swainson's Thrush: excellent numbers between 16 Sep - 16 Oct JNC (LHTOS). Water Pipit: 14 Sep (1) CRL (RLK); 16 Oct - 24 Nov (2-5) JNB (RLK). Loggerhead Shrike: 2 reports JNB (RLK); none on Knox Co. count, 29 Sep - first time missed; 12 Oct (1) DOL (JAK).

Vireo—Warbler: White-eyed Vireo: only 11 banded at NOR, about ½ of average (CPN). Solitary Vireo: 30 Nov (1) SLC (RLK). Philadelphia Vireo: 29 Sep (1 banded), 4 Oct (1) NOR (CPN). Warblers: poor migration at NOR with only 16 species banded. The following were in lower than average numbers there: Chestnut-sided, Black & White, Worm-eating, Canada, Common Yellowthroat, Yellow-breasted Chat (CPN). Orange-crowned Warbler: 23 Sep, 29 Oct (1) CHA (RAR). Yellow Warbler: 29 Sep (1) KNX (JAK); 17 Nov - EOP (1) KNX (Jim & Betty Mason, MLD). Black-throated Green Warbler: 25 Oct (1) Speedwell (GWM), late. Yellowthroated Warbler: 17 Oct (1) KNX (MLD), late. Common Yellow-throat: 29 Nov (1) AUS (RLK). Wilson's Warbler: 14 Sep (1) NOR (CPN); 2 Oct (1) JNC (MD); 6 Oct (1) KNX (MLD).

Tanager—Grosbeak: Tanagers: both Summer and Scarlet in much lower than average numbers at NOR banding station (CPN). Vesper Sparrow: 26 Aug (1) SAB (KHD); 16 Oct (1) AUS (RLK); 18 Oct (1) Speedwell (GWM); 8 Nov (1), 17 Nov (4) CHA (RAR). Grasshopper Sparrow: 26 Sep (1 banded) AUS (RLK). Fox Sparrow: 30 Nov (11) CHA (RAR), large number for the location. Song Sparrow: only 23 banded at NOR, 40% below average there (CPN). Lincoln's Sparrow: 19 Sep - 17 Oct (6 banded) AUS (RLK) - in past 6 years 58 have been banded there; 17 Oct (2) DOL (PDH, Hal Hubbs, JAK). Lapland Longspur: 27 Nov (1) KSP (SJS). Bobolink: 12 Sep - 9 Oct (1-6 irregular) AUS (RLK); 30 Sep (3) KSP (KHD, LHD); 5 Oct (5) KSP (LHD, PCH, PDH). Orchard Oriole: last 10 Aug (1) HRA (RAR). Purple Finch: widespread in moderate numbers; first dates: 16 Oct (1) JNC (MD); 21 Oct (2) KNX (ARH); 25 Oct (63) Speedwell (GWM); 10 Nov (4) CHA (LHD). House Finch: first winter flocks reported in JNC mid-October (LHTOS). Pine Siskin: widespread in moderate numbers; first dates: 1-18 Aug (1) Signal Mountain (JSL, LHD) (but more likely summering - Editor); 25 Oct (80-100) Speedwell (GWM); 25 Oct (6) Oak Ridge (WKJ); 28 Oct (2) SAB (KHD, LHD); 24 Nov (15) Pickett State Park (CPN). Evening Grosbeak: first dates: 20 Oct (1) NOR (CPN); 6 Nov (7) JNC (MD); 7 Nov (2) SAB (KHD, LHD); few reports at end of period.

Locations: AUS - Austin Springs; BOL - Boone Lake; BYC - Bradley Co.; CHA - Chattanooga; CRL - Cherokee Lake; CHL - Chickamauga Lake; DOL - Douglas Lake; EBF - Eagle Bend Fish Hatchery, Anderson Co.; FCF

- Fall Creek Falls State Park; FLL - Fort Loudoun Lake; HRA - Hiwassee River Area; JNC - Johnson City; JNB - Jonesborough; KSP - Kingston Steam Plant, Roane Co.; KNX - Knoxville; MAC - Marion Co.; NIL - Nickajack Lake; NOR - Norris; NRL - Norris Lake; SAB - Savannah Bay; SLC -Sullivan Co.; WBL - Watts Bar Lake.

Addendum: In the article "Scissor-tailed Flycatchers in Meigs County, Tennessee," *Migrant* 55:66, Harris listed the last date the flycatcher was observed in 1984 as 15 September. This date should be extended to 24 November because the compilers had inadvertently failed to pass the information on. The location was the same as Jenkins and Ryther's sighting of 30 August.

KENNETH H. and LILLIAN H. DUBKE, 8139 Roy Lane, Ooltewah, TN 37363.

EASTERN MOUNTAIN REGION—This period was warm and dry into early November. A light frost occurred on 7 October, about normal, but the first killing frost did not occur until 7 November. November was the only month of the period in which above average rainfall was recorded.

A good waterfowl movement was observed on 22 November, with 14 species, many in larger than normal numbers, present on Watauga Lake. The warbler migration was considered very normal. Purple Finches and Evening Grosbeaks started arriving in mid-October, and Red-breasted Nuthatches, first observed in mid-September, increased towards the end of the period.

Loon—Merlin: Common Loon: 2 Oct (1) WTL (DRH), first report; 17 Nov (25+), 22 Nov (125+) WTL (RLK, RC). Horned Grebe: 17 Nov (2) WTL (GDE, HHF)), only report. Double-crested Cormorant: 22 Nov (1) WTL (RC). Green-backed Heron: 4 Oct (1) ELI (HHF), lrs. Canada Goose: 15-28 Nov (7-9) RZF (GDE, HHF). Green-winged Teal: 22 Nov (2) WTL (RC). American Black Duck: 28 Sep (1) WIL (GOW, CFW), ers. Blue-winged Teal: in ELI area 15 Sep - 2 Oct in low numbers. Canvasback: 22 Nov (5) RNC (RC). Redhead: 22 Nov (20) WTL (RC), ers. Greater Scaup: 22 Nov (12) WTL (RC). Bufflehead: 4 Nov (10) WIL (CFW), ers, late. Hooded Merganser: 17 Nov (8) RIL (GDE, HHF), ers. Red-breasted Merganser: 22 Nov (36) WTL (RC). Osprey: 22 Aug - 10 Nov (1-3) WTL (RH). Northern Harrier: 13 Aug (1) ELI (Lois Herndon), early; 7, 13, 14 Sep (1) RNM (GOW, GWS, EHS, RC). Sharp-shinned Hawk: good flight, 12 reports in ELI area, above average. Cooper's Hawk: 7 reports in ELI area, about average. Red-shouldered Hawk: 30 Aug (1), 28 Sep (3) RNM (LHTOS). Broad-winged Hawk: 28 Sep (1) ELI (HHF), lrs. Merlin: 19 Oct (1) RNM (RC).

Plover—Flycatcher: Semipalmated Plover: 22-26 Aug (1) SJP (HHD). Sanderling: 16 Aug (1) RNC (SG, HHD); 8 Sep (3), 28 Sep (2) RNC (GDE, HHF). Least Sandpiper: 4 Oct (2) SJP (RLK), lrs. Pectoral Sandpiper: 30 Aug (1) SJP (RLK). Stilt Sandpiper: 14 Aug (1) RNC (RLK). Dowitcher sp.: 16 Aug (1) RNC (MD, SG). Caspian Tern: 22 Sep (2) WTL (GDE). Forster's Tern: 31 Aug (1) WTL (GDE). Yellow-billed Cuckoo: 28 Sep (1) ELI (HHF), lrs. Black-billed Cuckoo: no reports. Common Barn-Owl: 20 Jul - 10 Aug (2 pairs fledged young) SHL (*fide* GDE). Great Horned Owl: 22 Sep (1) ELI (HHF); 17 Oct (1) PWB (RC). Common Nighthawk: 16 Oct (2) ERW (GWS), lrs, late. Red-headed Woodpecker: 12 Sep (1) SMV (Howard Langridge); 25

Sep (1) WIL (RC). Yellow-bellied Sapsucker: 22 Oct (1) PWB (RC), ers. Least Flycatcher: 30 Aug (1) RNM (GWS), lrs. Olive-sided Flycatcher: 7 Sep (1) RNM (JPC, DTC); 28 Sep (1) ELI (HHF).

Martin—Grosbeak: Purple Martin: 4 Aug (2) ELI (*fide* GDE), lrs. Tree Swallow: 6 Nov (11) RZF (CFW), late. Red-breasted Nuthatch: 7 Sep (3) RNM (LHTOS), ers. Brown Creeper: 6 Nov (1) ERW (GWS), ers. Sedge Wren: 27 Sep (1) PWB (RC). Marsh Wren: 14 Nov (1) ERW (GWS), late. Swainson's Thrush: 12 Sep - 16 Oct in ELI area in high numbers (LHTOS). Hermit Thrush: 17 Nov (1) RIL (GDE, HHF), ers. Water Pipit: 12-30 Nov (10-25) PWB (RC *et al.*). Loggerhead Shrike: 17 Nov (1) SMV (GDE, HHF), only report. Solitary Vireo: 17 Oct (1) ERW (GWS), lrs. Philadelphia Vireo: 28 Sep (1) ELI (RLK, RC). Tennessee Warbler: 7 Oct (1) ELI (HHF), lrs. Nashville Warbler: 28 Sep (2) SMV (GOW, CFW), lrs. Magnolia Warbler: 8 Oct (1) ELI (HHF), lrs. Black-throated Blue Warbler: 23 Oct (1) PWB (RC), lrs. Pine Warbler: 11 Oct (1) WIL (HHD), lrs. Palm Warbler: 10 Nov (1) PWB (RC), lrs. Blackpoll Warbler: 4 Oct (1) Unicoi (GWS, MD). Summer Tanager: 24 Sep (1) ERW (GWS), only report. Blue Grosbeak: 28 Sep (1) RZF (GOW, CFW), lrs. Vesper Sparrow: 28 Sep (1) RNM (EHS); 28 Sep (1) SMV (GOW, CFW). Grasshopper Sparrow: 25 Sep (2) PWB (RC), lrs. Fox Sparrow: 15 Nov (4) RNM (RLK), ers. White-throated Sparrow: 30 Sep (1) ERW (GWS), ers. Purple Finch: 18 Oct (2) ELI (HHF), ers. House Finch: 15 Oct - winter flocks began moving into ELI area (LHTOS). Evening Grosbeak: 19 Oct (12) SHL (Richard P. Lewis), ers; numerous small flocks in ELI area since then (LHTOS).

Locations: ELI - Elizabethton area; ERW - Erwin; PWB - Powder Branch, Carter Co.; RZF - Razor Farm, Carter Co.; RIL - Ripshin Lake; RNM - Roan Mountain; RNC - Roans Creek, Johnson Co.; SHL — south Holston Lake; SJP - St. John's Pond, Washington Co.; WTL - Watauga Lake; WIL - Wilbur Lake, Carter Co.

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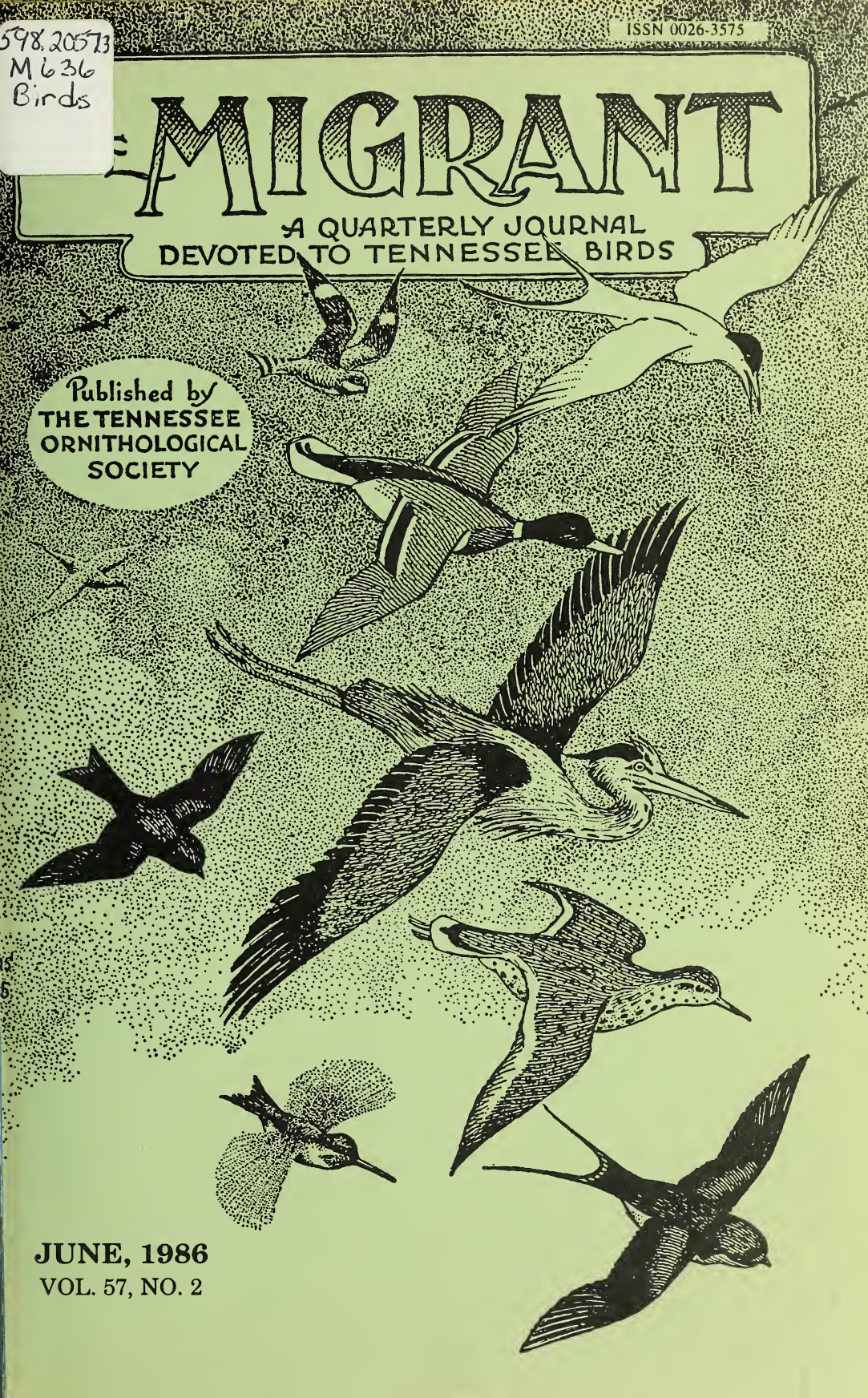

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AUTUMN HAWK FLIGHTS - 1985

Linda J. Fowler

During the 1985 fall hawk migration season, observers logged 182.3 hours at 6 Tennessee lookouts and reported 11 different species of hawks (Table 1). Most of the hawk watching was concentrated in September with few stations active by the end of the month. The peak of the Broad-winged Hawk migration passed through Tennessee 14-15 September, several days earlier than in previous years. The highlight of the season was the 3,380 Broad-winged Hawks seen at Ooltewah Firetower on 14 September (Table 2), which set a new high daily total for Broad-wings in Tennessee.

A high pressure system centered over the Great Lakes region pushed through east Tennessee on 12 September and by 13 September early morning temperatures had plunged into the 5°C (40°F) range. On 13 September, the only active station, Signal Point, reported 513 Broad-wings. On 14 September, the all-time daily Broad-wing high for Tennessee was reported from Ooltewah FT on White Oak Mountain. Lil Dubke reported that 2,383 of the 3,380 Broad-wings came through between 1100 and 1130 hours. On nearby Signal Pt., Ken Dubke reported 761 Broad-wings (9 hours), while Look Rock reported 713 Broad-wings (7 hours). Other active east Tennessee stations reported fewer Broad-wings (Table 1) on 14 September.

On 15 September, Audrey Hoff reported 686 Broad-wings (7 hours) at Look Rock. Paul Hartigan spent 4.5 hours on Thorn Hill and tallied 393 Broad-wings. The last daily Broad-wing count exceeding 100 was reported on 16 September by Linda Fowler and Boyd Sharp at Thorn Hill. No Broad-wings were reported from active stations after 29 September.

Resident Red-tailed Hawks were reported from all east Tennessee stations during September. However, few stations were active later in the season (October-November) during the peak of the Red-tail migration. The highest daily total of migrant Red-tails was 11 birds seen on 6 October at Signal Pt. by Ken Dubke. Only 5 Red-shouldered Hawks (0.03 birds/hr) were seen during the 1985 season among 4 different lookouts. This number is lower than the 1955-1984 average of 0.04 birds/hr for this species.

Sharp-shinned Hawks were reported from 13 September to 17 October in numbers (0.44 birds/hr) that exceeded the 12-year (1972-84) average of 0.33 birds/hr. Highest daily totals were reported on 24 September at Signal Pt. (10 birds) and Ooltewah FT (9 birds). Observers reported fewer uniden-

Table 1. Autumn Hawk Flights - 1985.

Date	Location	Reporter (# Observers)	Hours	TV	BV	SS	CH	Unid. Accip.	RT	RS	BW	Unid. Buteo	NH	OS	AK	Others	Total
08/18	Signal Pt.	D. Patton (1)	1.0								22						22
09/13	"	Patton/Kafka (1)	2.5			1					513		2		1		517
09/14	"	K. Dubke (4)	9.0			1					761		2	1	1		766
"	Ooltewah FT	L. Dubke (2)	7.0		3		2		2	2	3380						3389
"	Look Rock	A. Hoff (4)	7.0							1	713				1	6u	721
"	Mt. Roosev. FT	J. B. Owen (1)	6.5	3		1					55						59
"	Thorn Hill	L. Fowler (2)	8.5			6		1		1	355	2					365
09/15	"	P. Hartigan (2)	4.5					1			393	2		1		3u	400
"	Laurel Grove FT	L. Fowler (1)	2.0			2					15	1					18
"	Look Rock	A. Hoff (2)	7.0			2	2	5			685	9	1	2		6u	712
"	Signal Pt.	K. Dubke (4)	9.0			5	2		2		170				2		181
09/16	Ooltewah FT	L. Dubke (2)	4.0				1		1		10						12
"	Thorn Hill	L. Fowler (2)	3.5			1					129	1				1u	132
09/17	Mt. Roosev. FT	J. B. Owen (1)	2.0	3							5						8
09/18	"	Sheffield (2)	5.5	3	4		1		1		18		1	1			29
09/19	Look Rock	A. Hoff (1)	2.0			2	1				5						8
09/20	"	" (4)	5.8				1				32	1				1PG, 4u	39
09/21	"	" (4)	6.2			2	1		1		32	3			4	1u	44
"	Signal Pt.	K. Dubke (3)	8.0			3		1	4		45						53
09/22	"	"	8.5			4			2		2						8
"	Ooltewah FT	L. Dubke (1)	2.8	1	2				2		6					1PG	12
09/24	"	K. Dubke (1)	8.5			9		2	1		10		1	1			24
"	Signal Pt.	D. Patton (4)	6.5	4	10	10	1		5		29		1				60
09/25	Ooltewah FT	L. Dubke (2)	5.0	8	3	5					45		1				62
"	Look Rock	T. Howe (1)	1.0		4				1		0				1		6
"	Thorn Hill	P. Hartigan (2)	7.5			1	1	1			71	2		1		1u	78
09/27	"	J. B. Owen (1)	3.0	2	3						10						15
09/28	Look Rock	T. Howe (1)	1.5		2	2					5						9
"	Signal Pt.	K. Dubke (1)	8.0			3			1		4						8
09/29	"	"	8.0														0
"	Look Rock	A. Hoff (5)	3.5			2	1				13			3		1u	20
10/05	Signal Pt.	K. Dubke (1)	8.0		1	7	1		1	1		1		1	2		15
10/06	"	"	8.0			4	1		11						1		17
10/17	Thorn Hill	P. Hartigan (2)	1.5			7	2		1			1					11
Total			182.3	24	32	80	18	11	36	5	7533	23	9	11	13	23u, 2PG	7820

Table 2. Summary of 1985 Autumn Hawk.

Location	Hours	BW High	TV	BV	SS	CH	Unid. Acci.	RT	RS	BW	Unid. Buteo	NH	OS	AK	Others	Total	Total Hawks Per Hour
Signal Pt.	76.5 (11 days)	761 (9/14)	4	11	38	5	1	26	1	1546	1	5	2	7		1647	21.5
Look Rock	34.0 (8 days)	713 (9/14)	0	6	10	6	5	2	1	1485	13	1	2	9	18u, 1PG	1559	45.9
Thorn Hill	28.5 (6 days)	393 (9/15)	2	3	15	3	3	1	1	958	8	0	2	0	5u	1001	35.2
Ooltewah FT	27.3 (5 days)	3380 (9/14)	9	8	14	3	2	6	2	3451	0	2	1	0	1PG	3499	128.2

tified Accipiters this season and more Cooper's Hawks (18 total). Cooper's Hawks (0.10 birds/hr) this season exceeded the 12-year average of 0.07 birds/hr.

Nine Northern Harriers (0.05 birds/hr) were seen, which was slightly lower than the 12-year average of 0.06 birds/hr. Harriers were observed between 13-25 September with a maximum daily high of 2 birds. This year's total of 11 Ospreys (0.06 birds/hr) was consistent with the 12-year average of 0.06 birds/hr for this species. No Bald or Golden Eagles were seen from Tennessee lookouts this year.

American Kestrels were reported in numbers (0.07 birds/hr) which slightly exceeded the 12-year average of 0.06 birds/hr. Highest daily total of 4 birds was reported from Look Rock on 21 September. A Peregrine Falcon was reported from Look Rock on 20 September and Ooltewah FT on 22 September. Both birds were immature.

Most Tennessee lookouts reported resident Turkey and Black Vultures during the season although most stations were inactive in October during the migration peak. However, groups of migrating Turkey Vultures were reported from east Tennessee including: 17 October (157) House Mountain (Paul Hartigan); 17 October (140) Douglas Lake (Paul Hartigan); 25 October (155) Speedwell (George McKinney); 28 October (125) Norris (Linda Fowler); and 26 November (90) near Norris (Chuck Nicholson).

KEY TO SPECIES ABBREVIATIONS IN TABLES

TV - Turkey Vulture; BV - Black Vulture; SS - Sharp-shinned Hawk; CH -Cooper's Hawk; RT - Red-tailed Hawk; RS - Red-shouldered Hawk; BW - Broad-winged Hawk; NH - Northern Harrier; OS - Osprey; AK - American Kestrel; PG - Peregrine Falcon; u - Unidentified raptor.

LOOKOUTS

For a detailed description of lookout stations not described in this report, see *Migrant* 52:89-90, 1981; 53:62, 1982; 54:36-37, 80, 1983; 55:80, 1984.

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ANNOUNCEMENTS

NEW AUTUMN HAWK COUNT COMPILER

Linda Fowler has resigned as compiler of the fall hawk migration report for *The Migrant*, a position she held for 6 years. She will be replaced by Audrey Hoff, who will begin with the compilation of this fall's results. Hawkwatching results must be sent to her by 30 November in order to meet reporting deadlines imposed by *The Migrant* and *American Birds*. Remember that season-long observations from a few lookout points are more valuable in determining changes in hawk populations and migratory trends than are scattered reports from numerous areas. Hawkwatchers are encouraged to use the HMANA reporting form, and may obtain copies of it from Audrey. Use the TWRA Unusual Species card or TOS Certification Committee verification form to provide details on rare species, such as Peregrines, Merlins, Goshawks, and Rough-legged Hawks. Send results to Audrey R. Hoff, 4523 McCloud Road, Knoxville, TN 37918.

HENRY PARMER'S NOTEBOOK

The bird records of Henry E. Parmer (1914-1985) by his own wish have been given to the Tennessee Ornithological Society and placed in permanent storage in the Special Collections of the Library of the University of Tennessee, Knoxville. There they will be available to anyone. The notes are contained in a single large notebook. They are a mixture of his own records, reports from other observers, and compilations of records that appeared in *The Migrant*. Many of the observations have been published in his thorough study, "Birds of the Nashville Area" (first edition, 1966; fourth edition, 1985; Nashville Chapter, T.O.S.). The data, however, are not limited to the Nashville area but come from over the state.—JAMES T. TANNER, Curator.

MINUTES OF THE 1986 ANNUAL BOARD OF DIRECTORS AND BUSINESS MEETING

The 71st Annual Meeting of the Tennessee Ornithological Society was held jointly with the 67th Annual Meeting of the Wilson Ornithological Society on 17-20 April, 1986, at the Holiday Inn, Gatlinburg, Tennessee. The TOS Board of Directors meeting was called to order by President James Ferguson at 1700 on 19 April. The President officially welcomed the new Red River Chapter of Springfield. The minutes of the 1985 fall meeting were approved.

REPORTS OF OFFICERS

Tom Guschke, VICE PRESIDENT for Middle Tennessee, reported on activities of the Nashville, Murfreesboro, Columbia and John Sellars Chapters.

Lil Dubke, VICE PRESIDENT for East Tennessee, had the Chapter Presidents from Chattanooga, Greeneville, Knoxville and Lee Herndon report on their chapter's activities.

Dollyann Daily, VICE PRESIDENT for West Tennessee, reported on her district.

TREASURER George Payne reported for the period 1 November 1985 to 10 April 1986, listing income of $7,810.73; expenses of $4975.48; and a capitol reserve of $33,178.51.

The report of the CURATOR, James Tanner, was read by President Ferguson, and showed net income from sales of back copies of *The Migrant* since November 1985 was $279.78; the book sale from the W.W. Walker library netted $599.75; and the bird records of the late Henry E. Parmer have been placed in the library of the University of Tennessee, Knoxville.

The EDITOR of *The Migrant*, Charles Nicholson, reported that 3 issues have been mailed since the last meeting and that he expected to have the December 1985 and March 1986 issues mailed by the middle of May, which will get *The Migrant* on schedule. He asked that Season information and reports be turned in promptly.

There were no reports from the Directors-at-Large or from the Secretary.

REPORTS OF COMMITTEES

NOMINATING—Chairperson Martha Waldron thanked committee members Anne Hettish and Wallace Coffey and recommended Robbie Hassler as nominee for President-Elect. Steve Stedman moved her acceptance, which was seconded and passed.

FINANCE—Chairperson Richard Taylor reviewed the condition of the Society's funds invested in the Massachusetts Investment Trust account, which have a history of approximately 18% annual growth. Following discussion, no changes were decided upon. He announced that the Finance Committee had audited the Treasurer's books and approved them.

CONSERVATION/EDUCATION—Chairperson Ken Dubke announced that David Pitts and Wallace Coffey are the other committee members. He reported that most chapters have appointed Conservation/Education chairpersons as requested. He reported on Homecoming '86 Bluebird project activities, which included presentations to Governor Alexander, monitoring of boxes in roadside rest areas by local chapters, and preparation by David Pitts of a bluebird slide program, available for $15. Lil Dubke emphasized the excellent quality of the slide program, which is suitable for garden clubs, schools, libraries, etc.

Ken Dubke reported that he had recently distributed to each chapter a letter written by the Nashville Chapter about action to protect the Bald Eagle. Following discussion, he moved that the Nashville Chapter continue investigation as to what action TOS should take on this matter and present it at the fall meeting; the motion was seconded and passed.

George Mayfield distributed copies of a resolution passed unanimously by the Columbia Chapter, urging Monsanto to preserve their lakes and ponds. He moved for passage of the resolution, and the motion was seconded. During discussion, Charles Nicholson presented an amended resolution, which was passed.

Dubke pointed out that TOS does not have a permanent mailing address and with the agreement of Bob Hatcher, moved that the TWRA address be used to channel mail to TOS. Following discussion, the motion failed. Dubke also announced a conservation victory, a public ceremony to mark the donation to TWRA of 62 Acres of the Amnicola Marsh by the Norfolk Southern Railroad Corporation.

CERTIFICATION—Chairperson Charles Nicholson reported that the committee will be meeting soon and appealed for documentation for unusual sightings.

BREEDING BIRD ATLAS—Chairperson Paul Hamel recognized all committee members and regional coordinators, and announced that Rick Knight has agreed to serve as Co-coordinator with Fred Alsop in Region 9. Programs have been given to 10 chapters or other groups, TWRA has donated $750 to print forms, and 200 people have signed up to cover one or more blocks. He has a tax lawyer's opinion that travel expenses may be deducted as a charitable contribution on the 1040 tax form. He will present a budget at the fall meeting.

OTHER ASSIGNMENTS—Patches and Decals: Lil Dubke gave her supply of patches to Robbie Hassler, and announced that new decals will be ordered. When the remaining 256 patches are sold, TOS will have realized about $400 profit. President Ferguson thanked Dubke for her 13 years of service with this project. There was no report from the Editor of *The Tennessee Warbler*, Buzz Bean, who was absent. Steve Stedman, Fall Meeting Program Coordinator, announced the 1986 Fall Meeting will be held in Lebanon 17-19 October, hosted by the John Sellars Chapter. Papers are solicited, and Charles Smith from the Cornell Laboratory of Ornithology will give the Saturday night program.

OLD BUSINESS

Treasurer George Payne requested that chapters send their dues and

rosters to him so that all members will receive *The Migrant* and *Tennessee Warbler.*

NEW BUSINESS

President Ferguson proposed the appointment of Richard Taylor, David Pitts, Audrey Hoff, Bill Whitley and George Payne as Finance Committee members to serve through the 1987 Spring meeting. The motion was made, seconded, and passed. President Ferguson appointed to the Certification Committee James Tanner as member from East Tennessee, with Rick Knight as alternate.

Charles Nicholson proposed that TOS give a one year membership to Representative Jim Cooper of Shelbyville and his wife Martha Hayes Cooper, who are attending the meeting. Mrs. Cooper was a graduate student of Dr. Jerome Jackson at Mississippi State University and now works for the World Wildlife Fund. The motion was made, seconded, and passed.

Paul Hamel announced that the 1986 Foray will be at Standing Stone State Park in Overton County, 23-26 May. President Ferguson announced that the Memphis Chapter will host the 1987 Annual Meeting at Memphis, tentatively the first weekend in May. Ken Dubke moved to accept this invitation, which was seconded and passed.

Following the announcement of a TOS get-together after the banquet, the meeting was adjourned at 1820.

BUSINESS MEETING

The members of the TOS and the WOS met together for the buffet style dinner served by the Holiday Inn. President James Ferguson called the TOS Annual Business Meeting to order at 2045. He welcomed all present and expressed appreciation for the joint meeting with the WOS. President Ferguson noted that all TOS officers were in attendance and recognized each. He then called the roll of TOS chapters and members-at-large, who stood and where recognized. He introduced U.S. Representative and Mrs. Jim Cooper, thanked them for attending, and announced the gift membership voted them by the Board.

President Ferguson announced the Foray Dates, 1986 Meeting and 1987 Annual Meeting details, and reported that the Finance Committee had found the Treasurer's books in order. He read the resolution on Monsanto ponds passed at the Board meeting. He announced that the Board recommended the Nominating Committee's choice for President-Elect Robbie Hassler. George Payne moved that nominations be closed. The motion was seconded, and passed by acclamation.

President Ferguson thanked the Knoxville Chapter and the Local Committee for the meeting arrangements. Charles Nicholson, Chairperson of the Local Committee, introduced the speaker for the evening, Dr. James T. Tanner, who related the history of the Great Smoky Mountains National Park. Following this address, the meeting was adjourned.

CAROLYN H. BULLOCK, Secretary.

ROUND TABLE NOTES

FIRST RECORD OF PARASITIC JAEGER IN TENNESSEE—On 5 October 1985, in response to the passage of a cold front accompanied by strong northwesterly winds, Robinson visited the Pace Point and Britton Ford areas of the Tennessee National Wildlife Refuge in Benton and Henry Counties, Tennessee. During the day winds averaged 20-40 kph, and it was noted that various gulls and raptors were using the air currents, which provided good migration and soaring conditions. In all, 3 Franklin's Gulls (*Larus pipixcan*), 1 Bonaparte's Gull (*Larus philadelphia*), 7 Ring-billed Gulls (*Larus delawarensis*), 1 immature Bald Eagle (*Haliaeetus leucocephalus*), and 3 Ospreys (*Pandion haliaetus*) were observed. Late in the day, while crossing the bridge spanning Kentucky Lake at Paris Landing State Park, Robinson noted a dark larid flying near one of the small islands in the Lake; however, not enough sunlight was available to examine the bird closely.

Stedman was notified of the Franklin's Gulls and arrived at Pace Point on the morning of 6 October 1985. Upon discovering 3 Franklin's Gulls resting on the water near Paris Landing State Park, he visited that location. At 1012, a dark larid was discovered about 1 km offshore southeast of the park. It sat on the water and preened for several minutes and then periodically took to the air, circling randomly as if for food. The presence of a white flash at the base of the primaries on both wings, and two central rectrices slightly longer than the rest of the tail, confirmed that the bird was a jaeger, while its overall dark coloration indicated it was a dark phase bird. It was observed until 1037, after which Robinson was notified. Both observers returned to the site and relocated the bird at 1300. Although the bird was observed for 15 minutes, the glare from the sun on the water prevented the gathering of additional information about the bird's identity.

To place the sun at our backs, we proceeded to Pace Point and observed the bird from 1415 to 1615 at distances ranging from 300 m to 2 km. Its overall dark coloration, mottling on the underwings and upper tail coverts, and pale flanks indicated that we were observing an immature, dark morph jaeger. The white at the base of the primaries was extensive and flashy, forming a crescent of white on the upper and lower surfaces of the wing. Although more than 2 of the primary shafts on the upper surface were white, the exact number having this characteristic was not determined.

The bird continued to search periodically for food. Every time it landed it held its wings above its body for a few seconds, much in the manner of an Upland Sandpiper (*Bartramia longicauda*). During this behavioral activity, we failed to discern a second, smaller area of white on the underwing surface at the base of the primary coverts. The absence of this field mark was the first indication that this bird was not a Pomarine Jaeger (*Stercorarius pomarinus*).

When the bird was in flight, its upper tail surface was uniformly dark, but its upper tail coverts were a lighter, mottled brownish-white color. The underwing surface, excluding the white flash at the base of the primaries, exhibited a pattern of mottling or barring consisting of dull white and dark gray colors. The mandible was shiny, especially when viewed in

direct sunlight, at the base and dark at the tip; occasionally, the basal two-thirds of the mandible appeared bluish.

The flight of this bird was gull-like and similar to the flight of a Ring-billed Gull (or similar-sized gull) in overall rhythm and depth of wingbeat. The flight lacked the deep, ponderous wingbeats of a species such as an eagle; however the flight was not buoyant or tern-like. The wings were long, crooked at the wrist like those of an Osprey, and relatively pointed at the tips. The two central rectrices were only slightly longer than the rest of the tail feathers, but the shape of these two feathers could not be determined due to the great distance at which the bird was observed. The head, neck and mantle were dark gray-brown. When the bird swam, its sides appeared somewhat lighter than the mantle, consisting of a pattern of brownish mottling or barring. The cap was darker than the rest of the head and neck.

Immature jaegers are often difficult and sometimes impossible to identify. Usually several key field marks must be weighed together for identification to be made; these include the amount and pattern of white in the wings and the barring on the tail coverts and wing linings, the shape of the tail streamers, and the behavior, overall flight pattern, and size of the bird (Harrison 1983). All but the last of these factors had been satisfactorily analyzed when the bird was seen flying in a falcon-like manner directly toward a group of birds sitting on the water. It landed among these birds, which included 6 American Wigeons (*Anas americana*) and 1 Herring Gull (*Larus argentatus*). All three species were simultaneously within the viewing fields of our spotting scopes (Bushnell Spacemaster IIs with 20x and 25x eyepieces) for 4 to 5 minutes, and all eight birds were within approximately 8m of one another. When the jaeger briefly harassed the ducks, it was noted that its size very closely approximated that of each of the wigeons. Eventually it swam close to the Herring Gull, which was at least 25% larger than the jaeger. Later, the jaeger was harassed in flight by a Ring-billed Gull for about 30 seconds, during which time it could be determined that the gull was slightly larger than the jaeger. Relative sizes of all these species are given in Table 1.

Table 1. Body lengths (in cm) of Parasitic, Pomarine and Long-tailed Jaegers, Herring and Ring-billed Gulls and American Wigeon.*

Species	Body Length	Body Length Without Tail Streamers	Body Length With Tail Streamers
Long-tailed Jaeger		24-33	50-58
Pomarine Jaeger		44-58	65-79
Herring Gull	56-66		
Parasitic Jaeger		32-53	46-67
American Wigeon	46-58		
Ring-billed Gull	46-53		

*All body lengths adapted from Harrison (1983), except American Wigeon (Peterson, 1980).

The various field marks observed indicate that this bird was a Parasitic Jaeger (*S. parasiticus*). Its plumage helped eliminate Long-tailed Jaeger (*S. longicaudus*), the dark phase of which is virtually unknown (Cramp 1983), as did its size, flight characteristics and pattern of white in the upperwing surface. The pattern of its underwing, its size and flight charac-

Figure 1. Immature dark phase Parastitic Jaeger near Pace Point, Henry/Stewart Counties, October 1985. Photo by Wallace Todd.

teristics were also instrumental in eliminating Pomarine Jaeger. If accepted, this record constitutes the first for Tennessee, although one sighting of a possible Parasitic occurred 16-17 September 1978 at Woods Reservoir, Franklin County (Purrington 1979; Bierly 1980). The only other sighting in Tennessee of a member of the genus *Stercorarius* occurred 2-4 September 1984 at Island No. 13 in Lake County, where a Long-tailed Jaeger was seen and photographed (Stedman 1985). This sighting of Parasitic Jaeger is unusual not only because it is the first documented in the state but also because of the length of time involved in its stay; it was last sighted 22 October 1985 in the same area where first located (*fide* M.L. Bierly). In mid-October the bird was photographed (Figure 1) by Wallace Todd.

We acknowledge with thanks the contribution of a photograph by Wallace Todd.

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STEPHEN J. STEDMAN, Rt. 6, Pinewood Rd., Franklin, TN 37064, and JOHN C. ROBINSON, P.O. Box 215, Dover, TN 37058. Accepted 20 May 1986.

A SIGHT RECORD OF "BULLOCK'S" ORIOLE IN TENNESSEE—On 17 December, 1983, Don and Linda Magee and I spent the day participating in the Murfreesboro Christmas Bird Count. During mid-afternoon, we observed a large mixed flock of Common Grackles (*Quiscalus quiscula*), Red-winged Blackbirds (*Agelaius phoeniceus*), and Brown-headed Cowbirds (*Molothrus ater*) near I-24 in north central Rutherford County. Near the flock we noticed a pale gray bird feeding on honeysuckle (*Lonicera* sp.) berries in a fence row. The head was orange-yellow with a dark eye and dark icterid beak. The back was dark gray and the belly was light gray. We noted yellow-orange undertail coverts and the wings were black with 2 white wing-bars. The bird was observed with a 22x spotting scope at a distance of about 30m, and continued actively feeding as we left the area. All field marks were noted by each of the 3 observers. A camera was not available and no confirmatory photographs were obtained. We feel that this bird was a female Northern Oriole (*Icterus galbula*) of the "Bullock's" race. Although there have been reports of Northern Orioles on prior Christmas Bird Counts, this is the first well documented "Bullock's" Oriole report for the counts and for the state of Tennessee.

TERRY J. WITT, 507 Highland Terrace, Murfreesboro, TN 37130. Accepted 17 February, 1986.

A LONG-BILLED CURLEW IN LAKE COUNTY, TENNESSEE—At 0800 on 1 September 1985, while birding Island 13 on the Mississippi River in Lake County, Tennessee, I found a single Long-billed Curlew (*Numenius americanus*) standing along the bank of the river. The curlew was with 3 Little Blue Herons (*Egretta caerulea*) and 1 Great Blue Heron (*Ardea herodias*). At first the distance (300m) and light conditions kept me from determining whether it was a curlew or Whimbrel (*N. phaeopus*). At 0810 the herons and curlew flushed and flew towards me. The curlew passed by me at a distance of about 50m, and I saw its long down-curved bill and cinnamon underwings, and noted the lack of white on its head. I also heard it call, and had no doubt that it was a Long-billed Curlew. The curlew flew out of sight, and I was unable to find it after an hour of searching. Later that day, Jeff R. Wilson and Dollyann Daily of Memphis observed the bird in the same area.

This is the first record of a Long-billed Curlew for the state of Tennessee.

DONALD W. BLUNK, Rt. 2, Box 788, Dover, TN 37085. Accepted 17 February 1986.

BOOK REVIEW

THE ATLAS OF BREEDING BIRDS OF VERMONT—edited by Sarah B. Laughlin and Douglas P. Kibbe, 1985. University Press of New England, Hanover and London, xx + 456 pp., 204 maps, 8 plastic overlay maps, hardcover, $45.00.—The first in what is expected to be a long line of works devoted to breeding bird atlas projects in the states and provinces of North America, THE ATLAS OF BREEDING BIRDS OF VERMONT offers information on the breeding biology and distribution of 194 Vermont bird species, 137 of which have been known to breed in Tennessee. By far the bulk of this work is devoted to accounts of the species recorded as breeding during the period of the Vermont atlas project, 1976-81. However, the introduction offers preliminary information about several atlas-related subjects, including collecting data, recording field data, data analysis by physiographic region, results and interpretation, and biases and limitations, each of which helps clarify important aspects of the project. Several appendices follow the species accounts; these deal with the following matters: Vermont geography and ecology, plants cited, animals cited, Northeastern Breeding Bird Atlas Conference recommendations, and orders and families of birds confirmed as breeders in Vermont.

Easily the most intriguing portion of the work is the account of the species themselves. The 194 accounts were written by 15 different authors, but they vary surprisingly little in quality of content. Each account of the 178 birds confirmed as breeding in the state during the 5-year atlas project covers 2 pages, including about one and one-half pages of text, a black-and-white drawing of the species, a well-presented map showing areas of the state in which the species was noted as a possible, probable, or confirmed breeder, and two tables, one showing the number and percentage of priority blocks in which the species occurred and the other offering information on the distribution of the species by physiographic region. Fourteen other species accounts, of birds recorded as possible or probable breeders, are included after the main accounts and are similar in format but shorter in length than the main accounts. Finally, accounts for the reintroduced Peregrine Falcon and post-atlas-discovered Great Black-backed Gull complete this section of the work.

The texts of the species accounts will probably be the part of the work that readers will enjoy the most, as they are well-written, concise, and packed with pertinent information about the breeding biology of the species involved. Typically, the text begins with comments about the behavior and general distribution of the species; it then proceeds to a discussion of the distribution of the species in Vermont, whereafter follow comments about habitat preference, nest site selection, nest construction, egg dates, clutch size, incubation, and fledging. The accounts generally conclude with a brief summary of the changes in the species' population level over the last 100 years and/or any conservation issues which affect its status in the state.

Very few flaws occur in this work, attesting to the skills of its editors. On p. 13 the symbol used to indicate confirmed breeding is missing, for instance, but generally the work is free of such items. Its price will no doubt deter many, and to be honest I must admit that I hesitated before committing so many dollars to the purchase of a work without color illus-

tration; however, I'm delighted with the book despite this drawback, primarily because so many of the species which breed in Vermont are also found as breeders in Tennessee. This overlap in breeding species will make the book highly useful to Tennessee field workers involved in our state's atlas project.

THE ATLAS OF BREEDING BIRDS OF VERMONT will convince any amateur or professional ornithologist who peruses its pages that it is a highly worthwhile addition to his or her library, particularly those involved in atlas work.—STEPHEN J. STEDMAN.

ANNOUNCEMENT

THE 1986-87 WINTER ROADSIDE RAPTOR SURVEY

During the winter of 1986-87 a Winter Roadside Raptor Survey will be conducted in order to determine the distribution and abundance of the state's diurnal raptors and the Loggerhead Shrike. These surveys involve observers in about 3-5 hours of fieldwork at least once during the winter in a single county; however, multiple counts may be taken in a county, or single counts may be taken in several counties. For details and forms contact Stephen J. Stedman (Rt. 6, Pinewood Rd., Franklin, TN 37064; 615-791-1277). Results of the WRRSs will be published in *The Migrant.*

THE SEASON

WINTER: 1 NOVEMBER 1985 - 28 FEBRUARY 1986

The weather this season was characterized by wide swings in temperature, but with no periods of extreme cold as in recent winters. Precipitation was well below normal in December, there was record drought in January, and near normal rainfall in February. Snowfall was below normal and the heaviest snows occurred in mid-February. One might expect cold temperatures statewide in early December and snow in East Tennessee in mid-December to affect numbers on Christmas Bird Counts. Many counts (see *Migrant* 57:8-15, 20, 1986 for complete results) had high species numbers and a variety of half-hardy lingerers and northern invaders. Selected observations from the Christmas Bird Counts are included here, and regional compilers are reminded to identify count data as such when including it in any report.

As anticipated, numbers of waterfowl were low at some locations, although a Black-bellied Whistling-Duck which lingered from last season added to the variety of species reported. The number of Bald Eagles counted on the Mid-winter Eagle Census (Table 1), conducted in early January by state and federal agency personnel and TOS members, is about average for recent mild winters. Northern Goshawks were reported in the 2 central regions and there were several Rough-legged Hawk reports. The fall Sandhill Crane migration, which began earlier than normal, continued well into December, and there were wintering birds reported in Middle and East Tennessee. The only unusual gulls reported were a Franklin's Gull and a Black-legged Kittiwake near Knoxville. Red-breasted Nuthatches were fairly common in West and Middle Tennessee and somewhat less common in the eastern part of the state. Purple Finches were present in good numbers, and the explosive growth in House Finch numbers continued unabated. Pine Siskin and Evening Grosbeak abundance varied throughout the state, and each was numerous in some localities. Other unusual species reported this season were a Common Ground-Dove at Memphis, a Common Redpoll at Sewanee, and a White-winged Crossbill at Oak Ridge.—CHARLES P. NICHOLSON.

Abbreviations used in the following reports include: CBC - Christmas Bird Count; EOP - end of period; max - maximum number during period; m.ob. - many observers.

WESTERN COASTAL PLAIN REGION—The season was characterized by mild, above seasonal temperatures and availability of food and

habitat. While the number of species sighted was low, several unusual birds were reported. These included a White-winged Scoter and a Common Ground-Dove, both third reports of these species from West Tennessee. Erratic visitors, such as Pine Siskins and Evening Grosbeaks, were seen at several feeders. Purple Finches and House Finches were seen in unusually large numbers.

Table 1. 1986 Mid-Winter Eagle Survey

	Bald Eagle			Golden Eagle
	Adult	Imm.	Total	
West Tennessee				
Reelfoot Lake area	80	23	103	-
Dyer County	2	-	2	-
Moss Island WMA	1	-	1	-
Open Lake	6	2	8	-
Chickasaw NWR	1	-	1	-
Hatchie NWR	-	-	-	1 imm.
Tennessee NWR	25	25	50	3 ad.
Totals	115	50	165	4
Middle Tennessee				
Land-Between-the-Lakes	6	5	11	1 unk.
Cross Creeks NWR	1	-	1	-
Cheatham Reservoir	1	1	2	-
Center Hill Resv.	1	-	1	-
Cordell Hull Resv.	2	-	2	-
Dale Hollow Resv.	36	9	45	-
Cumberland County	1	-	1	-
Cannon County	1	-	1	1 ad., 2 imm.
Woods Reservoir	1	2	3	-
Normandy Reservoir	1	-	1	-
Hardin County	2	8	10	-
Totals	53	25	78	4
East Tennessee				
Norris Reservoir	2	2	4	-
Clinch River	1	-	1	-
Cherokee Reservoir	1	-	1	-
Tellico Reservoir	1	-	1	-
Watts Bar Resv.	8	4	12	-
Chickamauga Resv.	5	2	7	-
Nickajack Resv.	4	2	6	-
Guntersville Resv.	1	-	1	-
Totals	23	10	33	-
GRAND TOTALS	191	85	276	8

Loon—Gull: Common Loon: 11 Jan (9) BSU (JCR); 17 Feb (5) PAP (JCR). Horned Grebe: 7 Dec (47), 13 Dec (37), 25 Jan - 22 Feb (12) PLS (JCR). Double-crested Cormorant: 11 Jan (1) PAP (JCR). BLACK-BELLIED WHISTLING-DUCK: bird reported last period present 24 Nov - 18 Dec (1) PEF (JRW, MGW *et al.*) Canvasback: 27 Dec (661), 26 Jan (1110), 22 Feb (42) BRF (JCR). GREATER SCAUP: 21 Dec (1) Tiptonville Sewage Lagoons, Lake Co. (BBC, LCC); 23 Dec (1) ESL (RWP). OLDSQUAW: 22 Dec (3), 23-24 Dec (2) ESL (RW, LCC, BBC, DPB, DAD, JLL, WRP, MGW, JRW). WHITE-WINGED SCOTER: 16 Feb (1) Mississippi R. at MEM (JRW). Common Goldeneye: 11 Jan (543) BSU (JCR). Common Merganser: 17 Feb (40) BSU (JCR). Bald Eagle: during Jan (3 imm, 1 ad) Glengary Lake, SW of Somerville, Fayette Co. (JLS). Sharp-shinned Hawk: 22 Dec (2) Raleigh, MEM CBC (HBD *et al.*); 5 Feb (2) Shelby Forest State Park, Shelby Co. (CHB *et al.*). Cooper's Hawk: 22 Dec (2) MEM CBC (HBD, LCC *et al.*); 6 Jan (1) MEM (JLS); 26 Jan (1) BRF (JCR); 23 Feb (1) PEF (MGW, JRW); 25 Feb (1) MEM (MGW). Golden Eagle: 27 Dec (1) BSU (JCR); 26 Jan (1) BRF (JCR). Merlin: 20 Dec (1) Great River Rd., Dyer Co. (BBC, LCC, William B. Fowler); 22 Dec (1) MEM CBC (Harold Elphingston). Spotted Sandpiper: 1 Dec (1) PEF (DJS, JRW). Bonaparte's Gull: 25 Dec (5) PLS (JCR).

Ground-Dove—Grosbeak: COMMON GROUND-DOVE: 13 Jan (1) ESL (BBC, LCC, PBH); first Shelby Co. record. Cedar Waxwing: 21 Feb-EOP (over 50 sightings from 20 to 2500) MEM (*fide* MGW). Red-breasted Nuthatch: common locally and at feeders in MEM area (BBC). Common Yellowthroat: 15 Jan (3) Tigrett WMA, DYC (JCR). Indigo Bunting: 27 Feb - 5 Mar (1, banded) MEM (BBC). **CLAY-COLORED SPARROW:** 14 Jan (1) NW Hardin Co. (PBH), first West Tennessee record. Lincoln's Sparrow:

12-28 Feb (1) MEM (JRW). Harris' Sparrow: 11 Jan - EOP (1) BRF (JCR). Lapland Longspur: 24-28 Nov (1), 1 Dec (4), 20 Jan (20) PEF (JRW, RWP). Northern Oriole: 21 Jan (1) MEM (JRW). Purple Finch: common in MEM area (BBC). House Finch: 9 Dec - 28 Feb (142 banded) MEM (BBC). Pine Siskin: common in MEM area (BBC). Evening Grosbeak: fairly common in MEM area (BBC).

Locations: BRF - Britton Ford, Henry Co.; BSU - Big Sandy Unit, Tennessee Nat. Wildl. Refuge, Benton Co.; DYC - Dyer Co.; ESL - Ensley Sewage Lagoons, Shelby Co.; MEM - Memphis; PAP - Pace Point, Henry Co.; PEF - Shelby Co. Penal Farm; PLS - Paris Landing State Park, Henry Co.; REL - Reelfoot Lake.

MARTHA G. WALDRON, 1626 Yorkshire Dr., Memphis, TN 38119.

CENTRAL PLATEAU AND BASIN REGION—Erratic shifts in temperature and dry conditions characterized this winter. The alternating periods of warm and cold weather kept most bodies of water ice-free except in mid to late December, and apparently encouraged unusual rails, wrens, and a heron to overwinter. For the fourth consecutive season rainfall was below average; in fact, precipitation for 1985 was 20 inches below the annual norm in Nashville, and 1986 began more ominously still when only 0.19 inches fell in January, the lowest accumulation for that month since records have been kept in the area. However, rainfall in February was near normal, with very little of it coming as snow.

Although a fewer than normal number of reports of Black-crowned Night-Herons was submitted, two locales hosted Great Egrets, a highly unusual winter species in the region. A single bird stayed in Wilson County from mid-December to mid-January, while 2 were present in Stewart County in December, with at least one of them remaining the entire winter. Among other rarely reported wintering birds were 2 species of rails in Stewart County and 3 species of irregularly occuring wrens at several regional locations.

Numbers of ducks were expected to be low this winter, following poor nesting success in the prairie pothole region last summer, and this expectation was fulfilled. At Cross Creeks NWR, for instance, John Robinson noted that waterfowl "fluctuated tremendously" and "remained well below normal peak populations" throughout the season. Although Gadwall and Northern Shoveler were mentioned by Ann Tarbell as being in high numbers at Radnor Lake during the CBC season, most other species were down there and elsewhere in the region. An exception was the Oldsquaw, which appeared in 3 locales.

Following the CBC season, an analysis of CBCs in middle Tennessee for 1966-1985 was undertaken by Ruth V. McMillan. Results of her work are reflected in Tables 2-4, which present numbers of birds per 100 party hours of observation for selected declining, increasing, and semihardy/irruptive species in the region. Among the species in the first group is the American Coot, which has undergone significant decline since 1980. Apparently, that segment of the coot population which formerly wintered in middle Tennessee has withdrawn to the southeast of the Cumberland Plateau, where coot numbers remain high (as at Nickajack Lake). Reasons for this withdrawal are obscure and may stem from changes in conditions

outside of middle Tennessee rather than in it. Pileated and Hairy Woodpeckers have also decreased on the CBCs over the past 20 years, each having been reduced about 50% in that period; suburbanization of the areas where CBCs are conducted undoubtedly accounts for most of these declines. Three species associated with farmland have also been reduced in the past 2 decades—Northern Bobwhite, Loggerhead Shrike, and Eastern Meadowlark; the downward trend in their populations on the CBCs corroborates similar trends noted on the Breeding Bird Surveys (BBSs) conducted in the region (*Migrant* 55:90, 1984). Although the bobwhite population normally undergoes cyclic change, each of the low points in its cycle in the past 20 years has been lower than the one preceding it, a discouraging trend. Reasons for the decline of the shrike and meadowlark are uncertain, but probably involve changing agricultural practices as well as the subdividing of farmland.

Table 2. Birds Per 100 Party Hours for Species Declining on Middle Tennessee CBCs (1966-1985)

Species	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
Northern Bobwhite	43	97	182	111	84	77	74	76	96	77	62	64	40	69	66	40	71	71	22	31
American Coot	448	853	382	711	611	290	442	166	186	94	186	94	313	167	241	27	68	16	40	21
Hairy Woodpecker	19	22	30	15	22	24	16	13	14	16	13	15	14	18	15	12	17	10	12	10
Pileated Woodpecker	33	51	31	36	34	31	29	19	27	31	19	29	21	45	21	19	23	17	16	17
Loggerhead Shrike	36	55	32	16	39	36	35	20	26	17	12	23	23	25	17	17	26	15	16	17
Eastern Meadowlark	251	378	624	189	513	622	377	311	301	268	199	252	227	252	116	162	234	143	160	213

Table 3. Birds Per 100 Party Hours for Species Increasing on Middle Tennessee CBCs (1966-1985)

Species	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
Canada Goose	11	0	3.0	9	96	162	160	40	192	75	540	535	430	283	312	391	455	797	314	2300
Sharp-shinned Hawk	0	2.3	0	0	0	0.5	1.0	0.4	0.9	0	0.9	0.9	1.7	1.1	1.3	0.7	1.1	1.9	2.0	3.3
Red-tailed Hawk	17	24	26	20	25	33	20	17	20	17	23	25	25	25	30	26	30	32	29	41
Barred Owl	0.7	0	0	0.7	1.9	1.3	0.6	2.5	4.0	4.0	3.6	8.1	3.4	4.5	4.1	7.2	3.8	5.0	2.5	6.3
White-br. Nuthatch	18	4.6	26	9.5	16	9.4	6.1	5.9	6.7	12	5.1	16	17	33	22	21	29	20	34	30
House Finch	0	0	0	0	0	0	0	0	0	0	0.2	1.3	0	0.5	4.0	2.4	2.2.	29	25	177

Table 4. Birds Per 100 Party Hours for Semihardy/Irruptive Species on Middle Tennessee CBCs (1966-1985)

Species	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
Carolina Wren	70	83	71	55	65	115	90	60	77	108	70	40	39	52	48	51	84	57	72	44
Bewick's Wren	4.7	6.8	9.5	3.7	0.7	7.0	5.4	2.1	4.3	3.6	2.0	2.8	1.9	1.1	1.5	1.2	1.8	2.2	1.9	0.2
Eastern Bluebird	43	101	68	48	105	172	100	51	84	127	116	88	23	29	65	55	76	81	128	138
Red-breasted Nuthatch	0	0	1.3	2.9	0.7	0.5	1.6	1.0	2.5	3.6	2.6	17	2.5	0.7	3.7	11	2.4	2.0	0.8	12
Purple Finch	23	28	242	100	14	208	164	58	218	178	144	309	74	77	171	66	155	100	33	218
Pine Siskin	0	0	0	38	0	0.9	7	25	2.5	12	0	94	0.4	0.2	23	0.4	0.7	27	0.2	32
Evening Grosbeak	0	0	0	0	0	0	46	0.6	0	50	0.4	65	0	0.5	5.5	0.2	0	14	0	42

CBC results indicate that at least 6 species increased in numbers over the past 20 years (Table 3). Two of these—Canada Goose and White-breasted Nuthatch—have also increased on the BBSs, a doubly encouraging circumstance. Of the region's raptors, 3 are trending up on the CBCs, also encouraging, though the increase in Barred Owls may reflect a greater owling effort by CBC participants in recent years rather than a larger number of birds. About the impact of the very nearly exponential increase in House Finches (Table 3) over the past decade no safe comment

can be offered (except perhaps that the increase must be real rather than an artifact of sampling), given the very divided opinions which attend the expansion of this cardueline in the region.

Most readers will no doubt be in undivided agreement about the fine recovery which the cold-sensitive Eastern Bluebird continues to make (Table 4) since the severe winter of 1976-77 and 1977-78, which saw the species reduced to its lowest level in the past 20 years. Another semihardy species, the Carolina Wren, fared less well on the 1985 CBCs than did the bluebird, but it is still in much better shape than Bewick's Wren, which may well have been given the *coup de grace* by the record cold winter of 1984-85. If the CBCs are a reliable index of this species' abundance, it is now at the lowest level in 20 years and perhaps in historical times. **Every** sighting of this bird should be carefully noted and submitted for publication.

Irruptive species enjoyed a good season. For the first time since the winter of 1981-82, the Red-breasted Nuthatch occurred in good numbers (Table 4). It now appears to be on a 4-year cycle of invasion in the region. Purple Finches were recorded in higher numbers on the CBCs than in any year since 1977, though no evidence of a cycle in their incursions is discernible. Judging from the CBC data, it appears that Pine Siskins invaded in modest numbers, but most of them were found in Maury County; elsewhere their numbers were low. Evening Grosbeaks occurred in sizable flocks until the end of December; thereafter, their numbers thinned out.

Eighteen Winter Roadside Raptor Surveys (WRRSs) were conducted in the region during the season (Table 5). Modeled on a census described by Craighead and Craighead (Hawks, Owls, and Wildlife, 1956, pp. 7-9), these surveys occurred in 12 middle Tennessee counties and provided information on populations of 10 raptors and the shrike. They are an independent corroboration of the validity of the CBCs as indicators of the relative abundance of the region's raptors, because the rank order of the 10 species on the WRRSs (Table 6) closely parallels the order of the same species on the CBCs; also, the WRRSs suggest that the CBCs are a reliable index of population changes over the years. Unlike the CBCs, however, these raptor surveys can be used to detect population changes over the course of a single season, as the ones conducted in Williamson and Lawrence Counties in December and again in February suggest. Furthermore, information about the age and sex composition of winter raptors can be obtained from these surveys (e.g., of 196 kestrels sexed on the WRRSs, 111 were male, 85 female; of 108 Red-tailed Hawks aged, 94 were adult, 14 immature).

Let me close by offering thanks to Paul B. Hamel for commenting on a draft of part of this report, to Ruth McMillan for the many hours which she spent recording and analyzing the CBC data, to the 22 other observers who submitted WRRSs and helped get that pilot project under way, and to all the field workers noted below for observing, recording, and submitting records about our everchanging avifauna.

Loon—Night-Heron: Common Loon: after Dec the only reports were of 1-3 on OHL and PPL. Horned Grebe: 11 Jan (87) OHL, SUC/DVC (CKC), max. Double-crested Cormorant: no reports 27 Dec - 26 Feb. Great Blue Heron: 29 Jan (127) CCNWR (JCR), max. GREAT EGRET: 13 Dec - 17 Jan (1) Schute's Branch Recreation Area and Harbor Island Yacht Club, WLC

Table 5. 1985-86 Winter Roadside Raptor Data for Middle Tennessee

County	Observers	Date	km	BV	TV	BE	NH	SS	CH	RS	RT	RL	AK	LS	Total
Stewart	DWB	15 Feb 86	120	6	33	4	4	1	1	5	3	--	6	4	80
Hickman	DFV,PBH	17 Feb 86	172	10	27	--	1	--	--	3	11	--	9	3	64
Lawrence	SJS,DJS	14 Dec 85	105	26	24	--	--	--	--	--	8	--	13	6	77
Lawrence	DJS,MAB	23 Feb 86	118	5	43	--	--	--	--	--	11	--	11	3	73
Willamson	SJS,BHS	15 Dec 85	161	13	1	--	5	--	--	--	18	--	47	17	101
Williamson	SJS,DFV	16 Feb 86	129	3	12	--	2	--	--	1	7	--	27	7	59
Coffee	MDH,FH	21 Jan 86	161	--	27	--	--	--	--	--	2	--	5	4	38
Coffee	ELR,MDH FNM,PLM	8 Feb 86	116	--	2	--	--	--	--	--	3	--	21	3	29
Rutherford	TJW	12 Jan 86	105	11	--	--	--	--	2	--	12	--	32	5	62
Rutherford	RVM	29 Jan 86	105	--	--	--	1	--	1	--	7	--	14	--	23
Cannon	RVM,MRM	21 Feb 86	137	--	8	--	1	--	--	--	2	--	5	3	19
Wilson	RVM,MRM	24 Jan 86	112	--	8	--	--	--	--	--	7	--	13	6	34
Wilson	RVM,MAT	1 Feb 86	105	18	2	--	1	--	--	--	6	--	14	1	42
Sumner	RPF	5 Feb 86	100	--	4	--	--	--	3	--	8	--	8	5	28
Sumner	DTC,JPC	19 Feb 86	164	200	10	--	--	--	--	--	13	1	14	2	240
Putman	RWS,ML	16 Jan 86	111	--	--	--	--	1	--	--	2	--	5	2	10
Overton	JDH,RCH	20 Feb 86	150	--	13	--	1	--	--	2	6	--	9	4	35
Pickett	JDH,RCH	4 Feb 86	117	--	6	7	--	--	--	2	6	--	9	2	32
Totals	23 obs.		2288	292	220	11	16	2	7	13	145	1	262	77	1046
Birds/100 km				12.8	9.6	0.48	0.69	0.09	0.31	0.57	6.3	0.04	11.4	3.4	45.6

Table 6. A Comparison of 1985-86 Raptor Data from Middle Tennessee CBCs with 1985-86 Raptor Data from the Middle Tennessee Winter Roadside Raptor Surveys (WRRSs).[a]

Species[b]	Birds/100 Party Hours on CBCs	CBC Trend Over Last 20 Years	Rank Order on CBCs[c]	Rank Order on WRRSs	Birds/100 km on WRRSs
Black Vulture	94.7	None	1	1	12.8
Turkey Vulture	28.9	None	4	3	9.6
Bald Eagle	1.8	Up slightly	9	7	0.5
Northern Harrier[d]	9.1	None	5	5	0.7
Sharp-shinned Hawk[e]	3.4	Up moderately	7	9	0.1
Cooper's Hawk	2.4	Up slightly	8	8	0.3
Red/shouldered Hawk	4.9	None	6	6	0.6
Red-tailed Hawk	40.7	Up moderately	3	4	6.3
Rough-legged Hawk	0.8	Up slightly	10	10	0.1
American Kestrel	51.8	None	2	2	11.4

[a] Twenty-three observers conducted 18 surveys and covered 2288 km of roads in middle Tennessee counties to provide these data.

[b] Not included in these data is an Osprey reoorded on 1 middle Tennessee CBC.

[c] Note that the rank orders for 6 species are identical and that the rank orders for the other 4 species are close.

[d] Although no trend over the past 20 years is detectible for this species the number of birds per 100 party hours and the number of total birds (46) sighted on the 1985-86 CBCs were the highest ever during that period.

[e] As part of a 20-year trend of relatively constant increase, the 1985-86 data for this species are the highest ever in terms of total birds and birds/100 party hours.

(James D. Parrish, ATT, *et al.*), first NA winter record; 21 Dec - 25 Feb (2, later only 1) vicinity of DOV (JCR, DWB, Vicki Grafe), other than the preceding record, there are very few, if any, records of this species' overwintering in the region. Black-crowned Night-Heron: besides the usual wintering birds at OHL, only other report came on 18 Jan (1) PAP (ATT).

Swan—Duck: Tundra Swan: 21-26 Dec (6) CCNWR and Barkley WMA, SWC (JCR, DWB), only report. Snow Goose: 7 Feb (20, including only 1 "blue") Wiley's Spring Bay, SWC (DWB), max. Canada Goose: 28 Jan (36,000+) CCNWR (JCR), max. Wood Duck: no wintering concentrations occurred except perhaps at Duck River Unit, Tennessee NWR, where 3000 were reported, though this estimate is undoubtedly exaggerated by at least one and perhaps two orders of magnitude. American Black Duck: 14 Feb (8400) CCNWR (JCR), max. Mallard: 28 Jan (25,000+) CCNWR (JCR), max. Northern Shoveler: overwintering bird noted in LWC (DJS); a mid-Jan record also occurred at CCNWR (JCR); high number on Nashville CBC (ATT). Gadwall: 11 Dec (1065) CCNWR (JCR), max. American Wigeon: 11 Dec (1600) CCNWR (JCR), max. EURASION WIGEON: 22-25 Jan (1 male) CCNWR (JCR, m.ob.), about 8th state record and 4th consecutive winter at this site. Canvasback: 14 Feb (275) CCNWR (JCR), max. Redhead: 15 Feb (134) PPL (MHI, CKC); 25 Feb (142) CCNWR (JCR), max, but these two records may represent migrants, though a few birds did overwinter at each site. Ring-necked Duck: 13 Jan (2400+) CCNWR (JCR), max. Greater Scaup: 31 Dec (25) WDR (SJS, BHS), only report (females with auricular patches noted). Lesser Scaup: 1 Jan (110) RDL (CKC), max. Oldsquaw: 6 Dec - 1 Jan (1) RDL (RVM, ATT, CKC, m.ob.), continues a fall record; 9 Jan, 20 Feb (1) PPL, DVC (MHI, SJS); 10 Jan (1) LHL (DJS); more than the usual number of reports. Surf Scoter: 8 Dec (2) RDL (DMM), only report. Bufflehead: 22 Dec (86) RDL (CKC), max (a normal wintering number for this site). Hooded Merganser: Dec-Jan (40) Couchville Lake, LHSP (Reggie Reeves, *fide* RVM), max. Common Merganser: 21-29 Dec (up to 10) CCNWR (SJS, BHS, JCR, DWB); 31 Dec (4) WDR (SJS, BHS); only reports. Red-breasted Merganser: 5 Jan (22) Quarry Lake, RUC (TJW, DMM, Anne L. Hettish), max. Ruddy Duck: 20 Jan (2) Barkley WMA, SWC (DWB), only report after Dec.

Vulture—Merlin: Black Vulture: roosts of 150+ and 200 were noted at MOP and Gallatin Steam Plant, SUC, respectively; also see Tables 5 & 6. Turkey Vulture: 23 Jan (200+) Hillsboro, CFC (Chloe W. Peebles), max. Osprey: 27, 30 Dec (1/2) WDR and Highland Rim CBC (PLM, FNM), only report. Bald Eagle: besides the usual wintering birds on the larger lakes and reservoirs (Table 1), the following data were submitted: 28 Dec (1a, 2 imm) LHL (MDW), very few LWC records; 18 Jan (1a) PAP (ATT); additionally, nesting was noted in progress near CCNWR (*fide* JCR) and Normandy Lake, CFC (PLM, MDH). Northern Harrier: had best year ever on CBCs (Table 6). Sharp-shinned Hawk: also had best year ever on CBCs (Tables 3 & 6); well reported from many areas during Jan and Feb, also. Cooper's Hawk: second-highest number of birds per 100 party hours of observation recorded on CBCs for this species (Table 3). NORTHERN GOSHAWK: 17 Jan (1) Bodenham, Giles Co. (MDW), only report. Red-tailed Hawk: the scarce dark phase was reported in RUC (TJW) and CCNWR (JCR); see introduction. Rough-legged Hawk: 11 reports from Bedford Co., CHC, HPC, LWC, SUC, and SWC; a better than average year. Golden Eagle: 5 reports, 1 each from Cannon Co., CHC, HPC, and 2 from

SWC. Merlin: 17 Dec (1) LHSP (RVM, Hazel Cassel); 28 Dec (1) RUC (TJW); only reports.

Pheasant—Gull: Ring-necked Pheasant: 3 Jan (1 male) Stewart Creek Boat Ramp, PPL, RUC (RVM, MAT), only report. Ruffed Grouse: 24 Dec (1) BAH (RWS); all season (35 released in restoration project) near Cuba Landing, HPC (Peter Kalla); readers are urged to report all sightings of this species from the latter locale, especially if breeding evidence is noted. Virginia Rail: 1, 4, 25 Jan (2/2/1) CCSP (JCR, DWB), only reports; species has seldom wintered anywhere in region except MOP. Sora: 21 Dec (1 flushed from solidly frozen marsh) CCNWR CBC (SJS, BHS); 28 Dec - 25 Jan (1) CCSP (JCR, DWB); only reports of species which is rarely reported anywhere in region except at MOP during winter. American Coot: see introduction. Sandhill Crane: 5 Jan-EOP (1) Hwy 50 at Little Lot Rd., MUC (Kenneth G. Anderson, O. Bedford Lochridge), rare wintering species; 13 Jan (1) CCNWR (JCR); only reports. Least Sandpiper: 14 Dec - 1 Jan (1) CCSP (JCR); 4 Jan (4) PPL (CGD, *et al.*); only reports. Dunlin: 7 Dec (2) Old Hickory Beach, DVC (Donna J. Smith, Jan C. Alexander, JPC, CKC, SJS); 4 Jan (2) PPL (CGD *et al.*); only reports. American Woodcock: 14 reports, most of calling/singing birds; more than the normal number of reports. Bonaparte's Gull: 20 Dec (26) Gray's Landing, SWC (DWB), max. Ring-billed Gull: 2 Jan (1000+) Bryant Grove, PPL (*fide* MPS), max.

Owl—Blackbird: Short-eared Owl: 19 Dec (1) West Harpeth Rd., WMC (SJS, BHS), only report; first NA report since 1979. American Crow: all season (roost of 10,000+) 47th St., NASH (DFV). Red-breasted Nuthatch: widely reported; see introduction. Bewick's Wren: reported only from WLC (Earline C. Berry); now at all-time low level on CBCs (Table 4). House Wren: 16 Dec (1) CLA (Annie H. Heilman); 25 Dec (1) FCMR (JCR); 4 Jan (1) Hickory-Priest CBC (MPS); only reports. Sedge Wren: 21 Dec (1) CCNWR CBC (BHS, SJS), only report. Marsh Wren: 21 Dec - 4 Jan (1) CCSP (JCR *et al.*), only report. Water Pipit: 21 Dec (67) CCNWR CBC (*fide* JCR), max. Cedar Waxwing: 20 Feb-EOP (up to 500) LWC (DJS), max. Loggerhead Shrike: WRRS data show this species to be widely and fairly evenly distributed throughout middle Tennessee, with the only higher than normal concentration occurring in Williamson Co. (Table 5); CBC data show a steadily decreasing population over the past 20 years (Table 2). PROTHONOTARY WARBLER: 2 Dec (1) Bear Creek WMA, SWC (DWB), an unprecedentedly late record of this early-departing parulid; temperature was below 30°F at the time of this sighting. Common Yellowthroat: 28 Dec - 25 Jan (1) CCSP (JCR, DWB), only report. American Tree Sparrow: a very modest echo of the 1984-85 invasion occurred: 21 Dec (2) FCMR on CCNWR CBC (DWB); 25 Dec - 17 Feb (up to 6) CCNWR (JCR, DWB, Ellen J. Walker); 28 Dec (1) CLA (*fide* William Hudson); 4 Jan (1) Hickory-Priest CBC, NASH (PBH). Chipping Sparrow: 17, 19 Dec (1) DOV (JCR), only report. Vesper Sparrow: 15 Dec - 14 Jan (up to 20) Liberty Grove, LWC (DJS, MAB); 28 Dec (5) LWC CBC (DJS, MAB, Mark A. Reeves); 24 Jan - 16 Feb (up to 8) Tullahoma, CFC (MDH); only reports. Lincoln's Sparrow: 28 Jan (1) LBL (DWB), only report. Lapland Longspur: 1 Dec (3) Robertson Pond, LWC (DJS); 29 Dec, 22 Jan (1/4) CCNWR (DWB/JCR); only reports. BREWER'S BLACKBIRD: 13-15 Dec (up to 30) Bishop Chapel Rd., LWC (DJS, MAB, SJS); 28 Dec (6) Center, LWC (DJS); 23 Feb (1) LOR (DJS); only reports; second consecutive winter in LWC.

Finch—Grosbeak: Purple Finch: well-reported on the CBCs, but consi-

dered to be below normal by some observers in NASH and CLA; 463 birds banded, well below the levels of banding in some years in the 1960s and 1970s, when thousands were banded. House Finch: the comment of DFV seems as apt as any: "at least as common as during either of the past 2 years," when numbers were high; CBC data show this species to be increasing dramatically (Table 3). Pine Siskin: except in MUC, where Katherine A. Goodpasture banded 215 in February and where high numbers occurred on CBC, low numbers were the regional rule for this northern finch. American Goldfinch: no better than an average winter region-wide, though commoner in some areas than others, e.g., in CLA (David H. Snyder) and BAH (RWS). Evening Grosbeak: fairly widely distributed in region with fair numbers in some areas (e.g., up to 46 in LOR, 40 at CCNWR, 62 in DOV, and 50 in WMC); became scarcer after the CBC season.

Corrigenda: *Migrant* 56:51, 1985: in entry for Common Merganser delete the record for 15 Jan; *Migrant* 56:53, 1985: in entry for Yellow-headed Blackbird change "27 Jan-(Feb" to "27 Jan - 9 Feb."

Locations: BAH - Barnes Hollow, Putnam Co.; CCNWR - Cross Creeks National Wildlife Refuge, Stewart Co.; CCSP - Cumberland City Steam Plant, Stewart Co.; CFC - Coffee Co.; CHC - Cheatham Co.; CLA - Clarksville; DOV - Dover, Stewart Co.; DVC - Davidson Co.; FCMR - Fort Campbell Military Reservation, Montgomery and Stewart Cos.; HPC -Humphreys Co.; LBL - Land Between the Lakes, Stewart Co.; LHL - Laurel Hill Lake, Lawrence Co.; LHSP - Long Hunter State Park, Davidson Co.; LOR - Loretto, Lawrence Co.; LWC - Lawrence Co.; MOP - Monsanto Ponds, Maury Co.; MUC - Maury Co.; NA - Nashville Area (includes all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, and Wilson Cos., and parts of Dickson and Trousdale Cos.); NASH - Nashville; OHL - Old Hickory Lake (in Davidson, Sumner and Wilson Cos.); PAP -Pardue's Pond, Dickson Co.; PPL - Percy Priest Lake; RDL - Radnor Lake State Natural Area, Davidson Co.; RUC - Rutherford Co.; SUC - Sumner Co.; SWC - Stewart Co.; WDR - Woods Reservoir, Franklin Co.; WLC - Wilson Co.; WMC - Williamson Co.

STEPHEN J. STEDMAN, Rt. 6, Pinewood Rd., Franklin, TN 37064.

EASTERN RIDGE AND VALLEY REGION—The widespread long-term rainfall deficit continued throughout the region. Average temperatures from the reporting areas of Johnson City, Knoxville and Chattanooga were mixed.

In Johnson City, December temperatures were above normal until mid-month, then normal winter weather was prevalent until the end of January. February was warm until the 12th, when the heaviest snowfall of the winter occurred. After the 16th, temperatures were warmer than usual.

In Knoxville, temperatures in December were slightly below normal, and near normal in January and February. Unlike the last two winters, there were no sub-0°F temperatures, and there was no pronounced warming at the end of February as in the past few years. In the Chattanooga area, the average December temperature was the coldest recorded since 1969. January was slightly below average and February was warmer.

In July, the U.S. Fish and Wildlife Service issued a report stating the

number of breeding age ducks was down. On the local or regional scene, this was hard to confirm. One thing obviously apparent was the results of TVA's summer drawdown of Chickamauga Lake to kill water weeds. In the past these areas of weeds have always provided an abundant source of food, especially for Pied-billed Grebes, American Coots and Gadwalls. This season, because of a lack of food and feeding sites, few of these birds were present.

Peregrine Falcon sightings continued from the lower part of the region. On the Chattanooga CBC, 21 December, an adult was leisurely watched as it ate a duck and the Nickajack Dam immature remained until at least 8 December. Other sightings of an immature were later recorded, which may have represented the Nickajack bird moving around.

There is good news regarding Sandhill Cranes. The *Unison Call* (Vol. 7, No. 1), a newsletter to crane investigators, reported a total of 16,170 counted in the eastern population during the fall. Normally several hundred cranes remain in northern Indiana until the end of November, and this year 6000 were counted there on 11 December. They departed the area on 13-14 December when temperatures dropped to -2°F. This could account for the unprecedented number of cranes during January and early February in the Hiwassee River Area.

The early anticipation of a large number of winter feeder birds never really materialized. The number of Red-breasted Nuthatches in the northern part of the region either disappeared, dispersed, or went unrecorded. Overall, the other species seemed to have been widespread in small to moderate numbers, except for the House Finch, which continues to increase in numbers.

Loon—Night-Heron: Red-throated Loon: 1 Dec (1) CHL (KHD, LHD, CDB, RAR *et al.*). Common Loon: 16 Dec (8), 19 Jan (17) CRL (RLK); 2-5 BOL (LHTOS); 1-21 all period CHL (m.ob.). Pied-billed Grebe: 19 Jan (38) CRL (RLK); 6-124 all season CHL (m.ob.). Horned Grebe: 6 Dec (1) BOL (RLK); 16 Dec (10), 19 Jan (3) CRL (RLK); 10-30 regular CHL (KHD, LHD *et al.*). American White Pelican: 5 Dec (1) NIL (Richard H. Simms *fide* KHD). Double-crested Cormorant: 2 Dec (3) BOL (RLK); 1-29 Dec (1-3 occasional) CHL (KHD, LHD) - not observed as regular this season as in recent past; 16 Dec (2), 19 Jan (4) CRL (RLK); 4 Jan (1) NIL (AMJ); 26 Feb (1) SAB (RAR). Great Blue Heron: reduced numbers on DOL, especially after cold weather on 12 Dec, only 2 present on 14 Dec (JAK). Great Egret: 2-3 Dec (1) SAB (KHD, LHD); 2 Dec (2), 17 Dec (1) HRA (KHD); up to 2 in FLL area until at least 21 Dec, when 1 seen on Knoxville CBC, a first for the count (Joseph C. Howell, JBO, Paul S. Pardue). Yellow-crowned Night-Heron: 21 Dec (1 ad) CHA CBC (MAM, BGM).

Waterfowl: Tundra Swan: 21 Dec (1) Knoxville CBC (KTOS); 28 Dec (2) NIL (KHD), LHD); 8 Jan (3) HRA (TWRA). White-fronted Goose: 4 Dec (2) HRA (TWRA). Snow Goose: 1-6 white phase, CHL & HRA (TWRA); 1-4 blue phase, CHL & HRA (TWRA); 4 Dec (2) WBL (TWRA). Canada Goose: max 4 Dec (1135) WBL (TWRA). Green-winged Teal: 14 Dec (36), 18 Jan (10) DOL (JAK); 15-112 HRA (TWRA, KHD, LHD), not as regular in their usual haunts this year. American Black Duck: max 28 Jan (518) WBL (TWRA). Mallard: 11 Jan (5000) DOL (JAK). Northern Pintail: 17-29 Dec (35-85) HRA (KHD, LHD); 16 Feb (6) FLL (JAK). Northern Shoveler: 17 Dec (4) CHL (KHD, LHD); 11 Jan (1) DOL (JAK); 24 Jan (2) GNC (DJN,

BKB). Gadwall: max 16 Dec (1914) CHL & HRA (TWRA); max 28 Jan (535) WBL (TWRA). American Wigeon: max 28 Jan (208) WBL (TWRA); max 28 Jan (57) CHL & HRA (TWRA). Canvasback: 1, 17 Dec (1) CHL (KHD, LHD). Redhead: 5-110 sporadic CHL (KHD, LHD); 8 Jan (17) WBL (TWRA); noticeable increase in Knoxville area at end of season - 18 Feb (65) FLL, BLC (JAK). Ring-necked Duck: max 4 Dec (70) WBL (TWRA); max 16 Dec (483) CHL & HRA (TWRA). Greater Scaup: regular, max 3 Feb (400) CHL (KHD, LHD); 27 Feb (2) FLL, BLC (JAK). Lesser Scaup: 4-175 regular CHL (KHD, LHD); 19 Jan (100) CRL (RLK); 24 Jan (1) BLC (JAK). White-winged Scoter: 21 Dec (3) Knoxville CBC (KTOS); 9 Feb (2) CHL (KHD, LHD). Common Goldeneye: max 8 Jan (104) WBL (TWRA); 19 Jan (116) CRL (RLK). Bufflehead: max 28 Jan (79) WBL (TWRA); max 28 Jan (260) CHL & HRA (TWRA). Hooded Merganser: 2-14 Dec (3-6) BOL (RLK); 45-58 occasional HRA (KHD, LHD). Common Merganser: 8-16 Dec (1-5) NIL (AMJ, CDB, KHD, LHD, SJS). Red-breasted Merganser: 14 Dec (12) BOL (RLK); 21 Dec, 9 Feb (1) CHL (KHD, LHD). Ruddy Duck: regular, max 29 Jan (82) CHL (LHD, AMJ, TJW).

Vulture—Gulls: Vultures: late Feb (120+, 70% Turkey, 30% Black Vultures) Holston Army Ammunition Plant, Hawkins Co. (RLK), traditional site. Osprey: 21 Dec (1) CHA CBC (THP, DCP, JSL). Bald Eagle: 21-22 Dec (1 ad) BOL (RLK); 9 Feb (1 3-4 year old bird carrying stick) HRA (JCW, SLW). Northern Harrier: 21, 23 Dec, 6 Jan (1) JNB (RLK); 3, 7 Jan (1) Speedwell (George W. McKinney); 4, 12 Feb (2, 1) GNC (DJN, BKB). NORTHERN GOSHAWK: 21 Dec (1 imm) Knoxville CBC (David A. Hankins, CPN) -first Knox Co. record. Red-shouldered Hawk: 5-10 Jan (1) BOL (LHTOS). Rough-legged Hawk: 12 Jan (1 light phase) Sequatchie Valley, Bledsoe Co. (KHD, LHD, Angela C. Davis). Merlin: 26-27 Dec (1) Dunlap, Sequatchie Co. (Virginia G. Goins). Peregrine Falcon: 21 Dec (1 ad) CHA CBC (JCW, SLW, KHD, RLK); the immature reported last period from Nickajack Dam remained until at least 8 Dec (Johnny T. Parks, Randall L. Doyle); 22 Dec (1 imm) SAB (KHD, LHD); 1 Jan (1 imm) HRA CBC (JCW, SLW, SJS, BHS). American Coot: max 4 Dec (6138) CHL & HRA (TWRA); max 8 Jan (2229) NIL (TWRA); max 8 Jan (571) WBL (TWRA). Sandhill Crane: fall: 1-15 Dec (1194) HRA, HLC, CLE (KHD, LHD, CWC, T. Whitten Davis, C. Richard Hughes); winter: 1 Jan - 2 Feb (4-40) observed feeding, flying and "dancing", Armstrong Bend, Meigs Co. (JCW, SLW, SJS, BHS, CWC, RAR, RLK, Tom Pride, Sr.); spring: first northward movement reported 18 Feb; more reported lingering in HRA than usual, with from 10-96 cranes consistently reported to EOP (CWC, CDB, KHD, LHD); 26 Feb (62) west Knox Co. (Walter Shipe, *fide* JBO); 21 Feb (1) west Knox Co. (ABS). Spotted Sandpiper: 30 Dec (1) Greeneville CBC (WRN). Least Sandpiper: 16 Dec (2) SAB (KHD, LHD); 17, 29 Dec (3-4) HRA (KHD, LHD). Dunlin: 7 Dec (10) DOL (JAK) - only report from area; 30-45 sporadic SAB (KHD, LHD). Dowitcher sp.: 21 Dec (3) Knoxville CBC (Holly Overton, Roland Wauer) -first area winter record. Common Snipe: max 16 Dec (178) SAB (KHD, LHD). American Woodcock: 16 Feb (1) Roaring Fork, GNC, (RN, WRN); 24 Feb (1) Austin Springs (RLK). FRANKLIN'S GULL: 12 Dec (1) FLL, BLC (MLD). Bonaparte's Gull: 16 Dec (30) CRL (RLK); 21 Dec (8) BOL (RLK); 20 Dec (8) NIL (AMJ); 10 Jan (2) CHL (AMJ). Ring-billed Gull: 16 Dec (250+), 19 Jan (1400+) CRL (RLK); BOL wintering population of 100 considered low (LHTOS); max 2000 at roost site, CHL (KHD, LHD). Herring Gull: 16 Dec (4), 19 Jan (1) CRL (RLK), low. BLACK-LEGGED

KITTIWAKE: 15-17 Dec (1 imm) Fort Loudoun Dam (MLD *et al.*).

Barn-Owl—Ovenbird: Common Barn-Owl: 27 Dec (1) CHA (David C. Chaffin); 10 Feb (1) Roaring Fork, GNC (Virginia Williams). Great Horned Owl: active nest CHA (RAR). Red-headed Woodpecker: one regular JNB (RLK); 9 Feb (1 imm) Andersonville, ANC (CPN); 5-8 regular wintering population CHA (RAR); no other reports received. Horned Lark: 10 Dec (4), 6 Jan (25+) JNB (RLK *et al.*); 10+ regular WHP (JAK); 27 Dec (7) HRA (RAR) - not regularly found in this section; 6 Jan (125) Graysburg Hills Golf Course, Greeneville, GNC (PHB); 11 Jan (150) Nolichucky Valley, GNC (JAK). Purple Martin: first report 27 Feb (1) Madisonville (Sue Snyder *fide* JBO). Red-breasted Nuthatch: no reports from Johnson City; present in small numbers in KNX area; 2 reports from GNC; widespread in moderate numbers with 1-3 reported from 14 feeders in BYC, SEW, HLD and Ocoee, Polk Co. (m.ob.). Brown-headed Nuthatch: reported from new locations HLC (RAR, AMJ). House Wren: 21 Dec (1) CHA (Peter D. Robinson, Paul C. Harris, Daniel R. Jacobson). Sedge Wren: 1 Jan (1) HRA CBC (SLW, JCW, ABS). Blue-gray Gnatcatcher: 11-12 Jan (1) KNX (Susan E. Hoyle *et al.*). Hermit Thrush: "very common" in JNC area during Dec and thru 18 Jan (LHTOS). Gray Catbird: 21 Dec (1) CHA CBC (THP, DCP, JSL). Water Pipit: 24 Dec, 7 Jan (100+) JNC (RLK); 29 Jan - 16 Feb (9-50) GNC (BKB, WRN, RN); at KNX, more numerous in late Dec and Jan than usual, with 492 on KNX CBC on 21 Dec; 4 Feb (150) ANC (CPN). Cedar Waxwing: at KNX, much lower than average numbers throughout the winter, probably due to reduced berry supply resulting from previous winter's extreme cold (CPN). Loggerhead Shrike: 10 Dec, 31 Jan, 7 Feb (1) JNB (RLK *et al.*); 12 reports GNC (DJN, BKB); about average numbers on KNX and Norris CBCs, other birds reported from Jefferson, Blount and Claiborne Cos. (KTOS). Solitary Vireo: 7 Dec (1) Kingsport (RLK). Orange-crowned Warbler: 15 Feb into Mar (1 at feeder) KNX (Louise F. Fuller). Yellow Warbler: bird reported last period at KNX present 17 Nov - 11 Dec (Bettie Mason, MLD). Pine Warbler, 1-3 regular at feeders in HLC, BYC (AMJ, CDB, Paul H. Dietrich, Gertrude L. Fleming, Janet A. Phillips); also regular on Signal Mt., HLC, but not at feeders (JSL, DCP). Palm Warbler: 21 Dec (1) CHA CBC (RAR, BGM, MAM, Ella Howard, J.N. Howard); 22 Dec (1) Kingsport (RLK); 23 Dec (6) JNB (RLK); 28 Dec (1) Norris CBC (ABS); 1 Jan (3) HRA CBC (RAR, Rick Waldrop); 24 Jan (1) GNC (DJN, BKB). Ovenbird: 21 Dec (1) CHA CBC (THP, DCP, JSL).

Sparrow—Grosbeak: Chipping Sparrow: 20-30 regular at feeder, Ocoee, Polk Co. (JCW, SLW); 1 Jan (37, high) Hiwassee CBC (CPN, David A. Hankins, ABS, Mark Reeves); 10 Jan (15) HLC (AMJ). Vesper Sparrow: 10 Dec (5) JNB (RLK); higher numbers than usual with 7 sightings CHA, max 10 Feb (11) (RAR). Fox Sparrow: 6 Jan (5), 15 Jan (8), 1 Feb (1) Washington Co. (RLK); 27 Feb (4) GNC (BKB, DJN); present in high numbers at end of period KNX area (*fide* CPN); more common near home CHA, in past usually 4 found per trip, this season up to 14 (RAR). White-crowned Sparrow: 10+ regular WHP (JAK); 11 Jan (40 at 2 sites) Nolichucky Valley, GNC (JAK). Rusty Blackbird: 24 Dec (100) JNB (RLK). Purple Finch: at JNC, smaller populations than in previous years (LHTOS); in GNC, "a few more than last year;" in KNX area, widespread in moderate numbers, more than last winter, but not as abundant as in some recent years (KTOS *et al.*); in southern section of region, similar status reported by 12 feeder watchers in BYC, SEW and HLC, with flocks

of up to 30 reported (m.ob.). House Finch: noticeable increase reported throughout region; one report of 300+ from GNC; many flocks of 50+ in Knox, Blount and Anderson Counties (KTOS *et al.*); reports of up to 75 at feeders in BYC, SEW and HLC (m.ob.). WHITE-WINGED CROSSBILL: 20, 30 Dec, 18 Jan (1, photographed) Oak Ridge (L.F. Parsly, C.G. Sonneon, *fide* JBO). COMMON REDPOLL: 20 Dec - 14 Mar (1, photographed) SEW (James R. Peters, *et al.*), details to be published. Pine Siskin: 1-3 present after 2 Jan at feeders in JNC area (LHTOS); no reports from GNC; scattered small flocks up to 30, in Knox, Blount and Anderson Counties (James M. & Betty Reid Campbell, CPN, JAK *et al.*); widespread with numbers up to 100 being exceptional in BYC, SEW and HLC (m.ob.). Evening Grosbeak: flocks of 6-12 birds at JNC (LHTOS); one report of 10-12 birds in GNC (PHB); several small flocks of up to 20 in Knox and surrounding counties (*fide* JBO, m.ob.); widespread and sporadic in numbers up to 10 at feeders in BYC and HLC; 25-50 regular at SEW, and 100+ regular on Signal Mt., HLC (m.ob.).

Corrigenda: *Migrant* 55:93-94, 1984: on page 93, should read ' . . . 44 Ring-billed Gulls at Cherokee Dam on 3 June . . ." and on page 94, line 24, change 3 Jul to 3 Jun.

Locations: ANC - Anderson Co.; BLC - Blount Co.; BOL - Boone Lake; BYC - Bradley Co.; CHA - Chattanooga; CHL - Chickamauga Lake; DOL -Douglas Lake; FLL - Fort Loudoun Lake; GNC - Greene Co.; HLC - Hamilton Co.; HRA - Hiwassee River Area; JNC - Johnson City; JNB - Jonesborough, Washington Co.; KNX - Knoxville; NIL - Nickajack Lake; SAB - Savannah Bay, Hamilton Co.; SEW - Sewanee, Franklin Co.; WBL -Watts Bar Lake; WHP - White Pine, Jefferson Co.

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EASTERN MOUNTAIN REGION—The region was warmer than normal though mid-December, then cold through January. February started warm, but was cold from the 12th through 16th, when the heaviest snowfalls of the season occurred. Late February temperatures were near normal. Precipitation for December and January was less than half of the normal amount, continuing the year-long trend of low rainfall. February precipitation was near average.

Waterfowl populations were lower than average, and no major movements were noted. Both nuthatch species were sighted in above average numbers, while both kinglet species were considered below average. Numbers of Eastern Bluebirds, Carolina Wrens and Loggerhead Shrikes were slightly above normal, and Eastern Phoebe numbers were well below average.

Loon—Kestrel: Common Loon: 2-5 regular during Dec & Jan on WTL, SHL (*fide* GDE); no February reports. RED-NECKED GREBE: 28 Dec, 15 Jan (1) RNC (RLK, RC). Canada Goose: 3-7 irregular 2 Jan-EOP on WTR (*fide* GDE). Oldsquaw: 15 Feb (1) WTL (RC). SURF SCOTER: 16 Feb (1) WTR (GDE, GOW). Hooded Merganser: 6 Dec (3) RNC (C. Frank Ward). Ruddy Duck: 15 Jan (1) RNC (RC); 7 Feb (1) WTL (GWS). Northern Harrier: 4 Dec (1) RNM (RLK); 28 Dec (1) ELI CBC (GDE, HHF). Sharp-shinned Hawk: 8 reports in ELI area, about average (*fide* GDE). Cooper's

Hawk: 3 reports in ELI area, below average (*fide* GDE). American Kestrel: very numerous all period in ELI area (*fide* GDE).

Killdeer—Pipit: Killdeer: 28 Dec (1) RNM, Jane Bald, 6000 ft. elev. (RLK, Edward H. Schell). Great Horned Owl: 30 Dec (1) RNM (RLK); through period at SHL (Richard P. Lewis *et al.*). Eastern Phoebe: 10, 28 Dec (1) ELI (GDE), only reports. Golden-crowned Kinglet: 4 Jan (200) Great Smoky Mtns. CBC (m.ob.), record high count. Hermit Thrush: numerous in ELI area Dec through mid Jan, then in very low numbers (*fide* GDE). Brown Thrasher: 15 Feb (1) SMV (GOW), first spring report. Water Pipit: 10 Dec (100+), 15 Jan (5), 14 Feb (8) Powder Branch, Carter Co. (RC *et al.*).

Sparrow—Grosbeak: Chipping Sparrow: last report 28 Dec (25+) ELI CBC (Sally Goodin, GWS), later than usual. Fox Sparrow: 28 Dec (3) ELI CBC (LHTOS); 30 Dec (1) RNM CBC (GDE); 28 Jan, 1, 18 Feb (1) Erwin, Unicoi Co. (GWS *et al.*). Purple Finch: low numbers thoughout period in ELI area (*fide* GDE). House Finch: numbers almost double those of last year in ELI area (*fide* GDE). Red Crossbill: 24 Jan (2) Cove Ridge, Carter Co. (RC). Pine Siskin: first report 2 Jan (1) ELI (HHF), then 1-3 at various feeders to EOP. Evening Grosbeak: good numbers in ELI area all period, with 150+ at feeder near ELI (*fide* GDE).

Locations: ELI - Elizabethton, Carter Co.; RNC - Roans Creek, Johnson Co.; RNM - Roan Mountain, Carter Co.; SHL - South Holston Lake, Sullivan Co.; SMV - Siam Valley, Carter Co.; WTL - Watauga Lake; WTR -Watauga River in Carter Co.

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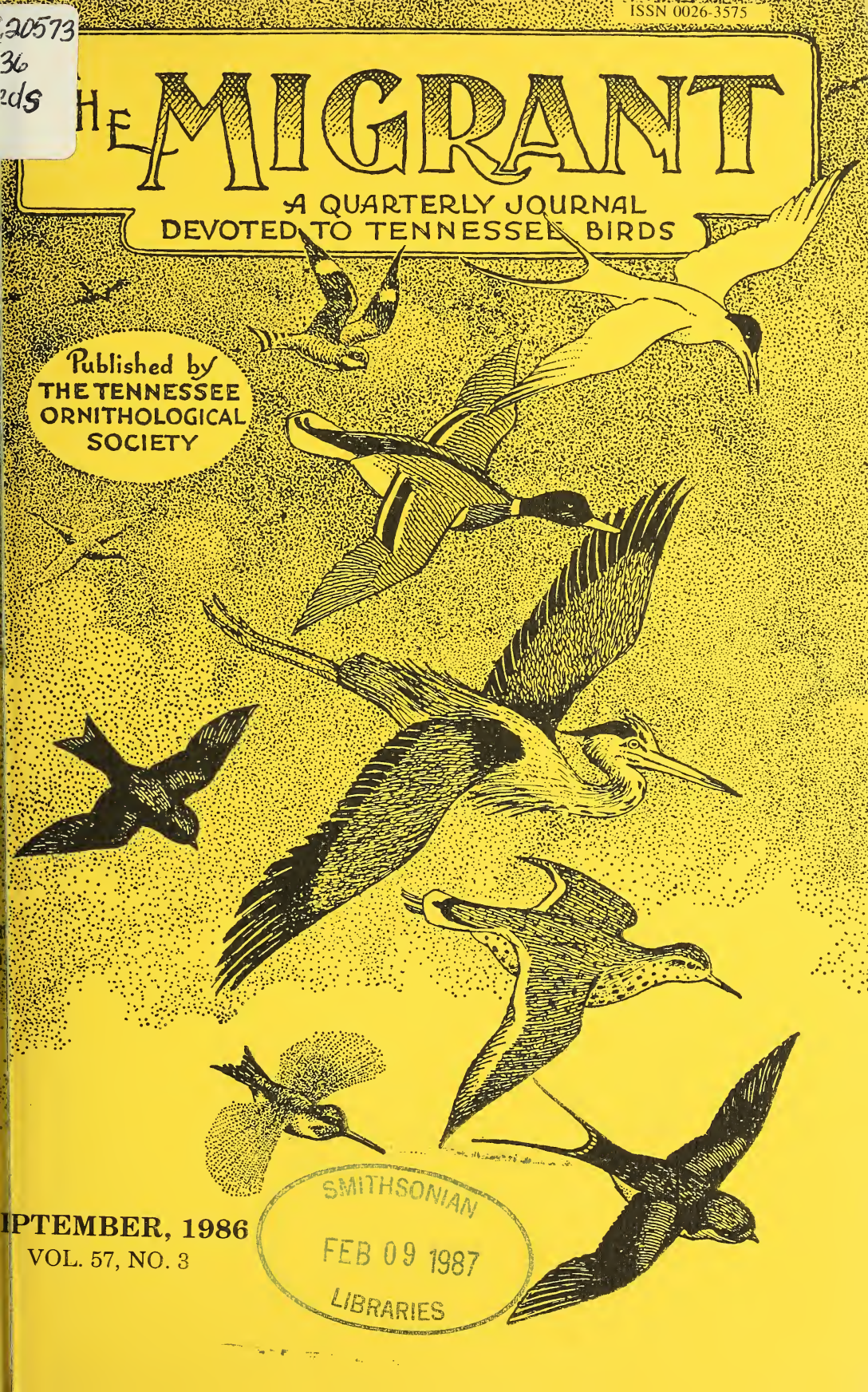

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THE 1986 SPRING FIELD DAYS

Richard L. Knight

The 1986 Spring Field Days yielded 220 species from 12 counts across Tennessee. The species total has been exceeded only once (225 species in 1983) and equaled once (1984). The most notable of several unusual species were Anhinga, Greater White-fronted Goose, American Avocet, Baird's Sandpiper, Laughing Gull, Least Tern, and Scissor-tailed Flycatcher. Many rarities were reported with little or no documentation, a trend that needs to be reversed.

INFORMATION ON THE COUNTS

MEMPHIS—27 April; 0730 to 2000; clear; temp. 62-85°F; Ben B. Coffey, Jr. (compiler—672 N. Belvedere, Memphis 38107).

LAWRENCEBURG—3-4 May; Sat. - 0500 to 2000, clear, temp 42-69°F; Sun. - 0530 to 2000, clear, temp. 35-70°F; 12 observers in 7 parties—Andy Augustin, Michael Beuerlein, Helen & Lloyd M. Clayton, Daphnie Griggs, Ann & Lee Mann, Chester & Dot McConnell, Damien J. Simbeck (compiler—Rt. 2, Box 3A, Loretto 38469), Don Simbeck, Morris Williams, Wylie Willis.

CLARKSVILLE—3-4 May; clear; av. temp. 60°F; 10 observers—Joe Allen, George Beringer, Mike Dinsmore, Debbie Gillis, John Habermel, Annie Heilman, Nancy Hughes, Marilyn Lucy, Linda Mattes, John Quick (compiler—Rt. 1, Box 114B, Cunningham 37052).

COLUMBIA—2-3 May; Fri. afternoon & all day Sat.; clear; temp. 40-70°F; 9 observers in 5 parties—Kenneth Anderson, Daniel Gray, William Jernigan, Anne & Bedford Lochridge, Cleo & George Mayfield (compiler—999 Sunnyside Dr., Columbia 38401), Mark Mayfield, Dianne Pressnell.

NASHVILLE—3-4 May; about 42 observers—Jerry Drewry (compiler). In addition, one *Empidonax* sp. was reported. Black-headed Grosbeak deleted; no details.

MURFREESBORO—3-4 May; Sat. - temp. 45-80°F, windy; Sun. - temp. 34-80°F, no wind; 16 observers—Lou A. Erwin, C.E. Greever, Edith Haynes, Anne L. Hettish (compiler—1018 Lawndale Dr., Murfreesboro 37130), Bob Hettish, John Hooper, Richard B. & Wilma J. Hunter, M. David McCarroll, Larry McFarlin, Ruth V. McMillan, Gene & Ruth Odom, John A. Patten, Alberta Spence, Terry J. Witt. In addition, four *Empidonax* sp. were reported.

1986 SPRING FIELD DAYS

	Memp	Lawr	Clar	Colu	Nash	Murf	Leba	High	Chat	Knox	Gree	Eliz
Common Loon	--	--	--	--	2	--	--	21	1	--	--	--
Pied-billed Grebe	2	--	1	2	1	1	--	--	--	--	--	6
Horned Grebe	--	--	--	--	--	--	--	--	--	--	--	3
Double-cr. Cormorant	27	--	--	--	4	--	16	--	--	10	--	--
Anhinga	10	--	--	--	--	--	--	--	--	--	--	--
American Bittern	--	--	--	--	1	--	--	--	--	--	1	--
Least Bittern	--	--	--	--	1	--	--	--	--	--	--	--
Great Blue Heron	14	--	--	1	14	--	5	3	99	4	5	3
Great Egret	1	--	--	--	4	--	--	--	--	2	--	--
Snowy Egret	--	--	--	--	1	--	--	--	--	--	--	--
Little Blue Heron	2	--	--	--	--	1	--	--	1	--	--	--
Cattle Egret	8	6	--	4	23	25	5	1	7	10	6	7
Black-cr. Night-Heron	--	--	--	--	87	--	--	--	--	--	--	--
Yellow-cr. Night-Heron	1	--	--	--	6	1	--	--	2	--	--	1
Gr. White-fronted Goose	--	--	--	1	--	--	--	--	--	--	--	--
Canada Goose	--	12	4	60	623	41	67	44	29	26	20	25
Wood Duck	16	4	1	14	43	19	7	2	20	40	32	23
Mallard	23	2	--	8	168	2	17	1	35	4	16	25
Blue-winged Teal	9	--	--	10	24	--	--	--	19	16	4	13
Northern Shoveler	--	--	--	--	--	--	--	--	1	--	--	1
Gadwall	--	--	--	--	--	--	--	--	5	--	--	--
American Wigeon	--	--	--	2	--	--	--	--	4	--	--	--
Redhead	--	--	--	--	--	--	--	--	1	--	--	--
Ring-necked Duck	--	--	--	1	--	--	--	--	--	--	--	--
Lesser Scaup	2	--	--	--	--	--	--	--	4	--	--	25
Bufflehead	--	--	--	--	--	--	--	--	--	--	--	6
Red-breasted Merganser	--	--	1	--	--	--	--	--	--	--	--	28
Ruddy Duck	9	--	--	--	--	--	--	--	--	--	--	--
Black Vulture	1	2	2	8	83	32	61	4	3	--	2	--
Turkey Vulture	2	35	28	23	124	30	30	16	10	15	20	35
Osprey	--	--	--	--	3	--	1	--	6	8	2	5
Mississippi Kite	6	--	--	--	--	--	--	--	--	--	--	--
Northern Harrier	--	--	--	1	--	--	--	--	--	1	--	--
Sharp-shinned Hawk	--	1	--	2	3	--	--	--	--	1	1	1
Cooper's Hawk	1	1	--	1	4	--	1	--	--	--	1	--
Red-shouldered Hawk	4	4	4	1	9	--	1	--	6	--	--	--
Broad-winged Hawk	8	2	1	4	6	--	2	--	11	4	7	19
Red-tailed Hawk	3	3	3	9	37	6	14	--	8	6	10	5
American Kestrel	1	2	3	9	41	59	5	1	1	4	4	5
Ruffed Grouse	--	--	--	--	--	--	--	--	--	2	--	4
Wild Turkey	2	14	--	16	--	--	--	--	--	--	--	--
Northern Bobwhite	26	25	14	34	160	33	13	5	33	41	32	12
King Rail	--	--	--	--	1	--	--	--	--	--	--	--
Virginia Rail	--	--	--	1	--	--	--	--	--	--	--	--
Sora	--	1	--	7	5	1	--	--	--	1	--	1
American Coot	1	--	--	4	4	--	--	2	82	--	2	1
Black-bellied Plover	1	--	--	--	--	--	--	--	--	--	--	--
Lesser Golden-Plover	1	--	--	--	--	--	--	--	--	--	--	--
Semipalmated Plover	32	3	--	--	13	--	--	--	4	--	--	--
Killdeer	27	10	6	7	86	52	10	8	27	59	31	39
American Avocet	--	--	--	--	4	--	--	--	--	--	--	--
Greater Yellowlegs	25	1	--	--	10	2	1	--	18	11	5	2
Lesser Yellowlegs	78	5	--	10	41	2	2	--	90	23	2	10
Solitary Sandpiper	54	18	--	7	44	13	13	2	18	31	46	20
Spotted Sandpiper	19	4	4	1	25	8	2	--	12	4	5	14
Ruddy Turnstone	--	--	--	--	1	--	--	--	--	--	--	--
Semipalmated Sandpiper	10	4	--	1	1	--	--	--	8	--	--	--
Western Sandpiper	1	1	--	--	1	--	--	--	--	--	--	--
Least Sandpiper	114	15	--	1	165	--	--	--	104	1	--	--
White-rumped Sandpiper	4	--	--	--	1	--	--	--	--	--	--	--
Baird's Sandpiper	1	--	--	--	--	--	--	--	--	--	--	--
Pectoral Sandpiper	189	2	--	2	10	--	--	--	24	1	--	9
Dunlin	1	--	--	--	2	--	--	--	--	--	--	--
Dowitcher sp.	--	--	--	--	1	--	--	--	--	--	--	--
Common Snipe	6	1	--	1	11	--	--	--	--	4	3	7

	Memp	Lawr	Clar	Colu	Nash	Murf	Leba	High	Chat	Knox	Gree	Eliz
American Woodcock	--	--	--	2	9	--	--	--	--	--	--	3
Wilson's Phalarope	2	--	--	--	--	--	--	--	--	--	--	--
Laughing Gull	--	--	--	--	--	--	--	--	1	--	--	--
Bonaparte's Gull	--	--	--	--	1	--	--	--	--	2	--	--
Ring-billed Gull	3	--	--	--	32	--	15	--	103	32	--	52
Herring Gull	--	--	--	--	6	--	2	11	--	--	--	--
Caspian Tern	--	--	--	--	7	--	--	--	--	--	--	--
Forster's Tern	--	--	--	--	9	--	2	--	4	--	--	10
Least Tern	--	--	--	1	--	--	--	--	--	--	--	--
Rock Dove	1	15	17	29	147	30	43	14	64	74	46	52
Mourning Dove	105	88	56	55	270	90	90	23	93	246	88	156
Black-billed Cuckoo	--	--	--	1	1	--	1	--	--	--	--	--
Yellow-billed Cuckoo	2	1	4	--	5	3	1	--	--	1	--	--
Common Barn-Owl	--	--	--	--	--	--	1	--	--	--	1	--
Eastern Screech-Owl	--	1	--	1	5	--	10	--	7	4	1	2
Great Horned Owl	1	--	--	3	5	--	6	1	3	4	2	2
Barred Owl	3	7	4	7	15	--	18	--	6	6	--	--
Common Nighthawk	--	--	1	5	13	15	21	2	7	8	--	2
Chuck-wills-widow	--	8	1	1	4	3	17	1	2	12	1	--
Whip-poor-will	--	3	2	6	41	5	7	3	2	4	3	6
Chimney Swift	45	26	62	65	510	1000	79	30	119	209	150	283
Ruby-thr. Hummingbird	20	4	6	4	24	9	1	2	8	16	1	7
Belted Kingfisher	1	5	3	6	15	10	8	2	17	10	1	11
Red-headed Woodpecker	21	2	1	12	13	2	1	3	4	--	--	--
Red-bellied Woodpecker	63	22	20	28	98	21	13	8	19	73	23	22
Yellow-bel. Sapsucker	--	--	1	--	1	2	--	--	--	--	--	--
Downy Woodpecker	17	11	8	26	76	12	6	1	18	19	19	26
Hairy Woodpecker	3	5	1	7	13	3	2	1	4	2	3	3
Northern Flicker	11	2	4	7	27	10	5	7	19	32	26	35
Pileated Woodpecker	18	6	6	17	36	4	2	2	15	21	21	13
Eastern Wood-Pewee	15	6	6	17	43	5	4	1	15	1	4	--
Acadian Flycatcher	15	11	4	2	22	--	--	--	9	--	--	--
Least Flycatcher	--	--	--	--	1	--	--	--	--	1	--	--
Eastern Phoebe	2	13	7	15	66	5	22	3	12	30	12	45
Great Cr. Flycatcher	33	14	6	20	54	13	9	4	12	21	20	5
Eastern Kingbird	21	17	13	19	126	49	55	19	40	20	9	9
Scissor-t. Flycatcher	--	--	--	--	--	--	1	--	--	--	--	--
Horned Lark	15	--	--	--	--	1	--	--	--	--	3	--
Purple Martin	33	17	45	30	108	42	32	28	124	119	41	158
Tree Swallow	5	12	1	8	98	57	4	--	111	6	16	12
N. Rough-winged Swallow	9	24	36	36	294	10	49	6	90	46	19	106
Bank Swallow	3	--	2	10	44	10	--	--	14	--	--	--
Cliff Swallow	--	1	250	2	3154	--	--	2	118	--	--	--
Barn Swallow	91	50	15	46	455	173	114	104	151	153	177	157
Blue Jay	29	43	22	39	208	59	85	33	82	447	286	181
American Crow	31	38	78	41	297	650	90	27	170	203	138	184
Fish Crow	8	--	--	--	--	--	--	--	--	--	--	--
Common Raven	--	--	--	--	--	--	--	--	--	--	--	6
Carolina Chickadee	73	14	20	28	177	33	27	2	76	142	47	66
Tufted Titmouse	79	25	35	32	156	23	18	7	54	101	77	91
Red-breasted Nuthatch	1	--	--	--	1	3	--	--	--	5	--	--
White-breasted Nuthatch	3	4	4	7	34	--	--	3	5	15	2	7
Brown-headed Nuthatch	--	--	--	--	--	--	--	--	1	--	--	--
Brown Creeper	--	--	--	--	--	--	--	--	1	--	--	--
Carolina Wren	45	18	20	22	108	10	9	5	51	115	59	69
Bewick's Wren	--	--	--	2	1	3	4	--	--	--	--	--
House Wren	--	--	--	2	22	13	14	--	1	6	18	9
Sedge Wren	--	--	--	1	--	--	--	--	--	1	--	--
Marsh Wren	--	--	--	--	7	--	--	--	--	--	--	--
Golden-crowned Kinglet	--	--	--	--	--	--	--	--	--	--	1	2
Ruby-crowned Kinglet	--	--	1	2	2	--	--	--	1	31	6	7
Blue-gr. Gnatcatcher	112	21	25	29	191	3	16	8	105	127	42	35
Eastern Bluebird	5	103	22	41	212	99	201	26	127	97	86	52
Veery	3	2	--	4	10	1	--	--	1	2	--	--
Gray-cheeked Thrush	2	1	--	--	10	--	--	1	3	--	--	--
Swainson's Thrush	53	--	5	3	107	17	--	1	4	4	--	--
Hermit Thrush	2	--	1	--	--	1	--	--	--	--	--	3
Wood Thrush	57	6	15	16	58	12	6	1	32	75	7	20
American Robin	42	53	120	72	561	1200	109	76	152	547	201	389
Gray Catbird	4	8	8	12	69	52	15	1	27	11	4	3

	Memp	Lawr	Clar	Colu	Nash	Murf	Leba	High	Chat	Knox	Gree	Eliz
Northern Mockingbird	18	33	47	31	142	75	77	40	60	125	64	81
Brown Thrasher	12	26	20	40	113	36	68	9	36	54	61	26
Water Pipit	--	--	--	--	--	--	--	--	--	--	21	90
Cedar Waxwing	6	3	15	11	60	52	5	--	22	50	45	13
Loggerhead Shrike	4	15	1	11	67	7	12	--	6	2	2	1
European Starling	183	125	169	61	936	6000	178	78	275	1513	406	700
White-eyed Vireo	92	10	19	35	109	10	6	3	17	41	13	20
Solitary Vireo	--	--	--	--	2	--	2	--	--	5	--	18
Yellow-throated Vireo	14	6	1	6	12	1	4	1	12	9	2	6
Warbling Vireo	10	--	7	--	34	--	1	--	1	--	--	1
Philadelphia Vireo	--	1	--	--	1	--	1	--	1	--	1	--
Red-eyed Vireo	69	32	15	25	114	29	7	9	150	170	9	36
Blue-winged Warbler	2	3	2	3	31	--	--	1	1	4	1	--
Golden-winged Warbler	1	--	--	--	2	--	1	1	--	--	--	--
Tennessee Warbler	107	4	38	42	167	26	6	4	44	22	--	--
Orange-crowned Warbler	--	--	--	--	--	--	--	--	--	1	--	--
Nashville Warbler	1	--	5	1	17	2	2	--	2	11	1	--
Northern Parula	97	12	2	10	25	--	--	--	2	1	--	12
Yellow Warbler	1	2	12	22	68	7	13	--	21	14	5	34
Chestnut-sided Warbler	--	2	3	4	12	5	5	--	12	4	--	10
Magnolia Warbler	4	3	--	2	6	7	--	--	8	1	1	--
Cape May Warbler	--	1	--	--	2	5	2	--	11	4	--	1
Black-thr. Blue Warbler	--	--	--	--	--	--	1	--	--	--	--	8
Yellow-rumped Warbler	17	2	14	13	129	27	16	13	41	216	28	92
Black-thr. Green Warbler	2	--	--	10	22	1	6	1	8	27	--	26
Blackburnian Warbler	--	--	--	4	2	1	2	--	4	--	--	1
Yellow-throated Warbler	8	7	2	5	34	4	3	1	25	4	--	5
Pine Warbler	--	2	--	5	3	6	5	--	38	6	2	4
Prairie Warbler	--	2	--	12	47	19	5	6	28	2	7	1
Palm Warbler	--	2	--	12	47	19	5	6	28	2	7	1
Bay-breasted Warbler	1	1	1	5	14	16	--	--	8	--	--	--
Blackpoll Warbler	3	--	--	4	10	3	--	--	7	1	--	--
Cerulean Warbler	21	4	--	7	15	3	--	--	2	5	--	1
Black & white Warbler	--	6	4	10	23	3	4	--	10	19	1	31
American Redstart	6	2	1	11	9	1	1	--	41	1	1	2
Prothonotary Warbler	42	3	5	15	26	1	7	--	12	11	2	1
Worm-eating Warbler	2	3	--	5	13	1	--	--	1	12	--	5
Swainson's Warbler	10	--	--	--	--	--	1	--	--	--	--	--
Ovenbird	5	--	--	8	10	3	--	--	2	45	3	66
Northern Waterthrush	1	2	1	1	16	5	6	--	2	1	--	--
Louisiana Waterthrush	15	12	3	9	30	2	2	--	5	--	--	7
Kentucky Warbler	54	9	8	21	49	2	4	1	17	2	1	1
Connecticut Warbler	--	--	--	--	--	--	1	--	--	--	--	--
Mourning Warbler	--	--	--	--	1	--	1	--	--	--	--	--
Common Yellowthroat	27	14	19	30	251	35	30	11	57	101	45	18
Hooded Warbler	11	4	2	15	13	--	--	--	16	17	3	42
Wilson's Warbler	--	--	--	--	3	--	--	--	1	--	--	--
Canada Warbler	--	1	--	--	1	--	--	--	--	1	--	--
Yellow-breasted Chat	7	6	10	28	76	9	13	4	27	19	4	1
Summer Tanager	63	14	9	25	64	6	12	5	9	8	4	1
Scarlet Tanager	11	8	7	22	60	17	2	4	19	37	8	11
Northern Cardinal	151	99	101	83	580	300	123	36	170	408	161	182
Rose-breasted Grosbeak	24	3	7	8	52	21	5	--	40	14	10	1
Blue Grosbeak	2	6	6	4	15	4	3	--	7	5	11	2
Indigo Bunting	93	11	54	76	303	47	67	8	106	58	11	4
Painted Bunting	1	--	--	--	--	--	--	--	--	--	--	--
Dickcissel	6	--	2-	6	3	3	--	--	--	--	--	--
Rufous-sided Towhee	16	31	--	43	163	47	23	5	88	124	69	78
Chipping Sparrow	10	11	6	9	76	6	8	3	31	39	32	30
Field Sparrow	1	11	8	22	151	58	63	8	95	173	88	32
Lark Sparrow	--	--	--	--	--	--	2	--	--	--	--	--
Savannah Sparrow	21	2	--	5	41	--	1	3	5	6	4	10
Grasshopper Sparrow	--	1	--	--	3	--	1	--	2	6	10	3
Fox Sparrow	--	1	--	--	--	--	--	--	--	--	--	--
Song Sparrow	--	1	5	1	37	14	5	9	68	179	134	309
Lincoln's Sparrow	3	2	--	1	11	--	--	--	--	--	--	--
Swamp Sparrow	1	1	--	1-	33	1	1	--	12	10	6	11
White-throated Sparrow	57	29	6	16	93	31	29	21	22	249	125	48
White-crowned Sparrow	11	1	6	19	22	14	1	--	--	3	14	11
Dark-eyed Junco	--	1	--	--	--	--	--	--	--	--	2	11

	Memp	Lawr	Clar	Colu	Nash	Murf	Leba	High	Chat	Knox	Gree	Eliz
Bobolink	--	109	13	100	137	50	--	--	6	6	--	--
Red-winged Blackbird	440	116	98	170	812	2500	75	71	251	241	315	127
Eastern Meadowlark	57	105	46	63	429	600	96	121	170	205	255	182
Rusty Blackbird	--	1	--	--	1	--	2	--	--	--	--	--
Common Grackle	115	78	89	220	683	10000	221	105	197	463	446	550
Brown-headed Cowbird	171	43	49	84	332	100	86	8	115	131	67	67
Orchard Oriole	29	11	2	23	146	9	20	7	33	20	5	5
Northern Oriole	26	3	2	2	33	6	2	--	8	3	2	2
Purple Finch	--	--	--	1	5	1	2	--	--	22	11	25
House Finch	1	--	4	--	4	3	1	6	17	9	9	25
Pine Siskin	4	45	--	31	37	5	--	18	180	1	1	22
American Goldfinch	20	78	59	97	553	69	50	94	179	438	225	525
Evening Grosbeak	--	13	--	11	45	2	--	12	45	14	3	87
House Sparrow	1	182	82	52	213	2500	42	43	60	86	55	110
Total Species	144	130	105	144	176	121	127	87	147	136	115	132

LEBANON—3-4 May; fair & windy; temp. 42-70°F; 10 observers—Ceil & Fred Detlefsen, Robert Hosier, Ruth V. McMillan (compiler—Rt. 2, Box 141, Lascassas 37085), Kay Norris, Ray Pope, Billy & Ramona See, Grace Speck, Melissa Tucker.

HIGHLAND RIM—26 April; Philip Medley (compiler—Rt. 2, Box 173B, Hillsboro 37342).

CHATTANOOGA—3-4 May; Sat. - 0500 to 2100, temp. 49-70°F, windy; Sun. - 0500 to 2200, temp. 40-79°F; 21 observers—Edith Bromley, Angela Davis, Jack & Linda Doyle, Ken & Lil Dubke, Gertrude Fleming, Paul Harris, Albert Jenkins, Ross Kinderman, Jonnie Sue Lyons, Barbara & Mike McMahon, Johnny Parks (compiler—1610 East 17th St., Chattanooga 37404), David & Tom Patton, Janet Phillips, Mary Ann Potter, Peter Robinson, Jim Rowell, Robin Rudd.

KNOXVILLE—27 April; 0500 to 2000; clear; temp. 51-91°F; 27 observers in 14 parties—Jane Beintema, Frank Bills, Sharon Bostick, Jim & Betty Reid Campbell, Howard Chitwood, Bob Collier, Barry Fleming, Brice Gilmer, Paul Hartigan (compiler—824 Thomas Circle, Seymour 37865), Audrey & Ron Hoff, Joe Howell, Susan Hoyle, Hal Hubbs, Burt Jones, Tony Koella, Beth Lacy, Holly Overton, J.B. Owen, Paul Pardue, Truett Patterson, Mark Reeves, Ken & Mable Sanders, Boyd Sharp, Jim Tanner. In addition, two *Empidonax* sp. were reported.

GREENEVILLE—27 April; clear; temp. reaching 91°F; 17 observers—Ben, Orland, & Phine Britton, Tio Carlos, Herbert Cragin, King & Margaret Gaut, Lenard Heckert, Richard & Willie Ruth Nevius, Daniel J. Nieves (compiler—112 Magnolia Dr., Greeneville 37743), Terry R. Nieves, Linda & Roy Northrop, Doug Ratledge, Royal Spees, Virginia Williams. Greater White-fronted Goose (reported incubating eggs) and Ring-necked Pheasant (no established population) were deleted.

ELIZABETHTON—26 April; 0330 to 1930; clear; temp. 50-88°F; 16 observers in 7 parties—Glen Eller (compiler—Rt. 9, Box 1340, Elizabethton 37643).

ROUND TABLE NOTES

SECOND TENNESSEE RECORD OF THE GROOVE-VILLED ANI—On 17 October, 1985, while birding at the Tigrett Wildlife Management Area about 8 km east of Dyersburg, Dyer County, Tennessee, I was attracted by the continuous calling and tail-twirling behavior of a small glossy blackbird in a fence row. Using 12x binoculars, I observed the bird at a distance of 20m for 3 minutes. It had a long rounded tail which it twirled in a circle, first in one direction, then the other way. After the bird flew to a small tree, I noted that its bill was high, curved and distinctly grooved. After about 2 minutes, it flew short distances in "flap and glide" flights, while continuing to twirl its tail and constantly repeat a short, sharp whistle. The bird flew out of sight, but I tracked it by its call and again studied it for several minutes. My total observation time was about 10 minutes, and I eventually lost the bird in thick brush. After consulting the 4th edition of Peterson's "A field guide to the birds", I identified it as a Groove-billed Ani (*Crotophaga sulcirostris*).

I alerted other birders who searched for the ani. To my knowledge, the only other individual to observe it was Don Manning, who saw it about 400 m west of where I observed it. The only previous Tennessee record of the Groove-billed Ani is that of one shot by a hunter 16 km north of Dyersburg on 29 November 1968. This bird was secured and identified by Kenneth Leggett (*Migrant* 40:7-9, 1969), and a post-mortem was performed by Albert Ganier (*ibid.* 40:9-11, 1969). This bird was also in Dyer County. Outside Tennessee, this tropical species has been reported along the Gulf Coast and as far north as Ontario (*Amer. Birds* 38(2):197, 1984). Most inland records have been in the fall.

WILLIAM G. CRISWELL, Route 4, Box 206, Dyersburg, TN 38024. Accepted 10 March, 1986.

NASHVILLE, TENNESSEE TELEVISION TOWER CASUALTIES, 1984—Avian casualties were collected during the fall of 1984 at the WSMV (formerly WSM) and WKRN (formerly WNGE) television towers at Nashville, Davidson County, Tennessee. This was the twenty-fifth year of this project, and the most recently published report, covering the years 1976-1983, was in the September 1984 *Migrant* (55:53-57). This note summarizes the 1984 results.

WSMV Tower Casualties—The WSMV tower was monitored each day from 1 September through 1 November, except for 2 days when no collection was made. Two hundred fifteen birds of 34 species were found (Table 1). The highest count of casualties was on 27 September when 66 birds were collected, and the next highest count was on 1 October with 24 birds. No unusual weather conditions were recorded by the Weather Bureau on 26-27 September, although there was some ground fog present at the tower on the morning of 27 September. The most numerous species collected was the Tennessee Warbler, with 43 individuals, followed by the Red-eyed Vireo, 24, Bay-breasted Warbler, 23, and Ovenbird, 19. No new species were added to the overall list, and there were no new early or late dates set. The Red-headed Woodpecker found on 23 September was only the second collected during 25 years, and the previous one was on 29 September 1963.

TABLE 1. Television tower casualties, fall 1984, Nashville, Tennessee.

Species	Season Totals WSMV	WKRN	Dates of Occurrence and Number Collected (in parentheses)
Sora	0	1	Sep 27(1)*
American Coot	0	1	Sep 28(1)
Cuckoo, Blk.-bil.	0	1	Sep 27(1)
Yellow-billed	2	1	Sep 17(1), 19(1), 24(1)
Belted Kingfisher	0	1	Sep 27(1)
Red-h. Woodpecker	1	0	Sep 23(1)
Marsh Wren	2	0	Sep 23(1), 30(1)
Kinglet, Gol.-cr.	0	1	Oct 21(1)
Ruby-crowned	2	0	Sep 27(1), Nov 1(1)
Thrush, Swainson's	2	1	Sep 5(1), 27(1), Oct 6(1)
Wood	5	1	Sep 27(1)(1), Oct 7(1), 11(2), 12(1)
Gray Catbird	6	2	Sep 27(1)(1), 30(1), Oct 5(1), 6(1), 11(1), 14(1), 20(1)
European Starling	1	0	Oct 4(1)
Vireo, Yel.-thr.	3	0	Sep 27(1), Oct 20(1), 25(1)
Philadelphia	5	0	Sep 27(3), Oct 1(1), 26(1)
Red-eyed	24	0	Sep 27(6), 29(1), 30(2), Oct 3(2), 4(1), 5(1), 6(2), 7(7), 11(1), 12(1)
Warbler, Tennessee	43	7	Sep 6(1), 24(1), 27(16)(2), 28(1), 29(1), 30(4), Oct 1(4), 5(5), 6(6)(1), 7(2)(1), 20(3)(2)
Orange-crowned	1	0	Oct 26(1)
Nashville	6	0	Oct 5(1), 6(4), 14(1)
N. Parula	1	0	Sep 27(1)
Chestnut-s.	3	1	Sep 27(2)(1), Oct 5(1)
Magnolia	10	3	Sep 26(1), 27(6), 29(2), Oct 5(1), 6(1), 9(1), 20(1)
Yellow-rumped	3	0	Oct 18(1), 20(2)
Black-th. Green	5	0	Sep 30(1), Oct 6(2), 11(2)
Blackburnian	3	0	Sep 27(2), Oct 6(1)
Palm	4	1	Sep 27(1)(1), 28(1), Oct 1(2)
Bay-breasted	23	4	Sep 11(1), Oct 1(2), 5(4), 6(5), 7(4)(1), 9(1), 20(6)(2), 25(1)
Black-and-white	7	0	Sep 27(4), Oct 1(2), 11(1)
Amer. Redstart	6	1	Sep 27(5), 30(1)(1)
Worm-eating	1	0	Oct 5(1)
Ovenbird	19	5	Sep 24(1), 25(1), 26(2), 27(7)(1), 28(3), 30(1), Oct 1(2), 7(1), 11(1), 20(4)
Common Yellowthroat	10	2	Sep 27(4)(1), 30(3)(1), Oct 11(2), 12(1)
Canada Warbler	0	1	Sep 4(1)
Yellow-br. Chat	3	0	Sep 11(2), 28(1)
Scarlet Tanager	2	0	Sep 27(1), Oct 23(1)
Northern Cardinal	1	0	Sep 27(1)
Rose-br. Grosbeak	1	3	Sep 27(1)(2), 30(1)
Indigo Bunting	4	0	Sep 27(1), Oct 10(1), 11(1), 18(1)
Sparrow, Song	1	0	Oct 6(1)
Swamp	1	0	Oct 9(1)
Unidentified	4	0	
Total	215	38	
Number Species	34	19	

*Underlined number is from WKRN tower; others from WSMV.

The total collection of 215 at WSMV may be compared with 106 in 1983, 107 in 1982, and 84 in 1981.

WKRN Tower Casualties—Monitoring at the WKRN tower was irregular in comparison with WSMV, and predation by house cats was a continuing problem. Collectors found numerous piles of feathers, many of which were unidentifiable. Because of the irregular collection and cat predation, WKRN results (Table 1) are not comparable with those of previous years or with WSMV results. Thirty-eight individuals of 19 species were collected on 14 days. The most numerous species were the Tennessee Warbler, with 7 collected, and the Ovenbird, with 5 collected. The Belted Kingfisher collected on 27 September was only the second collected, and the previous one was on 28 September 1968.

This long-term project would not have been possible without the interest and active participation of a group of Tennessee Ornithological Society members. Collectors this season were Sandra Bivens, Louise Jackson, Portia MacMillan, Henry Parmer, Ann Tarbell, David Vogt and Miriam Weinstein. We also thank the maintenance staff of WSMV for their assistance. Bird specimens in good condition were donated to the Cumberland Museum and Science Center or to the Warner Park Nature Center.

KATHERINE A. GOODPASTURE, 3407 Hopkins Lane, Nashville, TN 37215. Accepted 15 March, 1986.

COMMON REDPOLL AT SEWANEE, TENNESSEE—During a period of moderately heavy snowfall at about 1300 on 20 December 1985, I observed a single female Common Redpoll (*Carduelis flammea*) perched on a feeding platform about 5 m from my living room window in Sewanee, Franklin County, Tennessee. At this distance, I could clearly discern the bird's dark chin spot, which separated it from the Pine Siskins (*C. pinus*) with which the redpoll was feeding. With the use of 7x binoculars I was able to note the reddish cap as well as the following differentiating field marks. In contrast to the siskins, this individual appeared to be less boldly streaked, with lighter brown on the back and rump. The breast and sides were an off-white with some dark brown streaking especially noticeable on the sides. Both my wife Cheri and I observed the bird for approximately 15 minutes during which time I obtained several recognizable photographs taken through the window with a 300 mm telephoto lens.

Although this bird was rather unpredictable and generally would visit my feeder for only 5 to 15 minutes at a time, it stayed in the area until 14 March 1986. One other Sewanee birder, Jerry Ingles, was able to observe the bird in early January. During the numerous occasions I had to observe the bird feeding, I was rather surprised to find that this individual never extracted sunflower seeds by cracking their husks, but instead it scavenged for bits of seed dropped by the other finches.

JAMES R. PETERS, SPO 1157, University of the South, Sewanee, TN 37375. Accepted 25 August 1986.

THE SEASON

SPRING: 1 MARCH - 30 MAY 1986

This was, again, a very dry season, with less than half the normal amount of rainfall in middle and east Tennessee. The drought was apparently not as severe in the extreme western part of the state. The regional compilers differed in their assessments of temperatures, which were described as cool in the west, above normal in middle Tennessee, and generally above normal in the Ridge and Valley Region.

The warbler migration in middle Tennessee was described as dull, and the passerine migration in the Ridge and Valley Region was described as unspectacular. Judging from the reports from the other areas, these assessments probably apply statewide. Among the unusual passerines reported were a Harris' Sparrow and a LeConte's Sparrow in west Tennessee in March, and a Sharp-tailed Sparrow and Black-headed Grosbeak in middle Tennessee in May. The nonpasserine migration seemed to be somewhat more exciting. There was the usual abundance of shorebird reports, and several reports of rare species. These included the highest number of Short-eared Owls reported in the state in several years at Duck River Unit in March, a Purple Gallinule in Stewart County, and Least Terns at Cross Creeks refuge. A Great Black-backed Gull was reported at Paris Landing in March. This is probably the sixth report from the state, although the lack of substantiating details supporting some previous reports makes evaluating them difficult. Finally, a bird tentatively identified as a Clapper Rail was found in Elizabethton in April.

As most readers know, this is the first year of the Tennessee Breeding Bird Atlas project, and many began atlas fieldwork this season. Among the exciting results received to date are Bachman's Sparrows in Giles County for the second year, several Brown Creepers in west Tennessee river bottoms, and the first nest record of the Rose-breasted Grosbeak in the Cumberland Mountains of Tennessee.

Readers will notice that the name of the Central Plateau and Basin Region is changed to the Highland Rim and Basin Region. The new name is closer to the commonly used names for the physiographic regions making up middle Tennessee, i.e. the Highland Rim and Central Basin. An updated map will appear in the next issue.—CHARLES P. NICHOLSON.

Abbreviations used in the following reports include: ers - earliest report of season; lrs - latest report of season; max - maximum number during season; m.ob. - many observers.

WESTERN COASTAL PLAIN REGION—This season can best be characterized by low rainfall and cool temperatures. With a decrease in the flow of southerly winds, the number of species and individual migrants was lower than in preceding years. Sightings of infrequently recorded species were made by field observers new to west Tennessee. These conscientious, consistent observations greatly enhanced the coverage within the region. Although the number of species was low for 1986, several early dates were recorded.

Loon—Crane: Common Loon: 16 Mar (3) PLS (DWB); 23 Mar (21), 4 May (3) Pace Point, HNC (JCR). Horned Grebe: 8 Mar - 10 Apr (24-1) PLS (JCR). Double-crested Cormorant: 29 Mar (4) PLS (JCR); 12 Apr (110) Bass Landing, DeSoto Co., MS/SBC line (BBC, LCC); 13 Apr (76) same area (MTOS). Anhinga: 27 Apr (kettle of 10 riding thermals) SFP (LCC *et al.*); 15 May (2) Waller Pond, Anderson-Tully WMA, LDC (Dave Vandergriff, Paul B. Hamel, RPF). Green-backed Heron: 19 Mar (1) Wapanocca NWR, ARK (HBD, Sue C. Ferguson, Selma L. Lewis). Tundra Swan: 15 Mar (1) Gooch WMA, Obion Co. (JCR). Canvasback: 16 Mar (31) BRF (DWB, JCR). Ruddy Duck: 9 Mar (2000), 23 Apr (650) Robco Lake, SBC (BBC, LCC). Mississippi Kite: 19 May (2 ad, 1 imm) Nixon Cr. at Forked Deer, HYC (RPF, PIK); 31 May (1) HWR (Susan N. McWhirter, N.P. McWhirter *et al.*). Cooper's Hawk: 12 Apr (1) PEF (JWR); 27 Apr (1) North Lake, SBC (LCC); 4 May (1) BRF (JCR). Golden Eagle: 1 Mar (1 imm) BSU (JCR). Sora Rail: 13 Apr (1) ESL (JRW); 27 Apr (2) PEF (MGW); 28 Apr (1) ESL (Diane P. Bean, DAD, JRW, MGW); 30 May (1) ESL (CHB, DAD, MGW). American Coot: 16 Mar (1600+) PLS (DWB); 13 Apr (1190) PLS (JCR). SANDHILL CRANE: 13, 18 May (2 ad) Fort Pillow State Park, LDC (RPF, Robert L. Brown, Dick Whittington).

Plover—Gull: Black-bellied Plover: 27 Apr (1) ESL (WRP). Lesser Golden-Plover: 15 Mar (206) Lake and Dyer Cos. (JCR). Semipalmated Plover: 27 Apr (32), 11 May (31) ESL (JRW). Lesser Yellowlegs: 27 Apr (78) ESL (MTOS). Solitary Sandpiper: 27 Apr (54) ESL (MTOS); 28 Apr (102) ESL (CHB, DAD, MGW); 3 May (114), 4 May (92), 11 May (38), 18 May (6) ESL (JRW). Upland Sandpiper: 12 Apr (8) PEF (JRW). Semipalmated Sandpiper: 16 May (27) PEF (JRW); 18 May (365) ESL (JRW). Western Sandpiper: 27 Apr (1), 18 May (1) ESL (JRW). White-rumped Sandpiper: 27 Apr (4), 11 May (13), 18 May (57) ESL (JRW). Baird's Sandpiper: 27 Apr (1), 1 May (1) ESL (JRW). Dunlin: 27 Apr - 11 May (1), 18 May (2) ESL (JRW). Short-billed Dowitcher: 13 Apr (1), 18 May (1) ESL (JRW); 9 May (10) LKC (JCR). Wilson's Phalarope: 27 Apr (2) ESL (WRP). Laughing Gull: 9 May (1) Island 13, LKC (JCR). Bonaparte's Gull: 2 Mar (3) PLS (DWB). GREAT BLACK-BACKED GULL: 2-3 Mar (1) PLS (DWB); 8 Mar (1) PLS (ECC, MHI).

Swallow—Finch: Cliff Swallow: 30 Mar (2) PLS (JCR). Barn Swallow: 23 Mar (4) Robco Lake, SBC, 23 Mar (8) MEM, 6 May (72) MEM (BBC, LCC). Fish Crow: 23 Mar (2) MEM (BBC); max 11 Apr (10) OVP (BBC). Brown Creeper: 1 May (1) N of Rossville, Fayette Co.; 5 May (1) Forked Deer River, Madison Co.; 14 May (1) Reelfoot Lake, LKC; 23 May (1) Obion River, HNC (RPF). Water Pipit: 9 May (1) LKC (JCR). Solitary Vireo: 28 Mar (1) Big Hill Pond, McNairy Co. (MGW). Swainson's Warbler: 14 Apr (1) SFP (LCC, HBD); Apr-May (0) OVP (BBC); 31 May (14) along Hatchie River, HYC (BBC). Vesper Sparrow: 23 Mar (1) BRF; 13 Apr (1) BSU (JCR).

LeConte's Sparrow: 29 Mar (1) BRF (JCR). Lincoln's Sparrow: 11 Mar (2) MEM (JRW); 16 Mar (1) MEM (MGW); 16 Mar (1) BRF, 9 May (1) LKC (JCR). Harris' Sparrow: 16 Mar (1) BRF (DWB, JCR); 21 Mar (1) BRF (MHI). House Finch: small numbers through 30 Mar, uncommon except at one location in SE MEM, where they are nesting (BBC).

Locations: BRF - Britton Ford, Henry Co.; BSU - Big Sandy Unit, Tennessee Nat. Wildl. Refuge, Henry Co.; ESL - Ensley Sewage Lagoons, Shelby Co.; HNC - Henry Co.; LDC - Lauderdale Co.; LKC - Lake Co.; MEM - Memphis; OVP - Overton Park, Shelby Co.; PEF - Shelby Co. Penal Farm; PLS - Paris Landing State Park, Henry Co.; SBC - Shelby Co.; SFP -Shelby Forest State Park, Shelby Co.

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HIGHLAND RIM AND BASIN REGION (formerly Central Plateau and Basin Region)—Migration this spring caused little excitement among field observers until mid-May, when a flurry of unusual sightings occurred. Prior to that, generally warm, dry weather with southerly winds produced excellent conditions for migration (as in the spring of 1985), thus reducing numbers of birds encountered on the ground. Rainfall in March (2.29 in) was well below normal in Nashville, while that for April (0.52 in) was the lowest accumulation **ever** recorded for that month; May precipitation (3.36 in) was an inch deficient with most of it falling toward the end of the month. Temperatures were above normal during the period though some cooler days occurred (e.g., on 23 April a record low of 31°F was recorded in Nashville, followed on 25 April by a record-tying high of 87°F; at least 2 other record highs were recorded in that month). As a result, leaf emergence was ahead of schedule for many species of plants.

Fair numbers of unusual species were reported during the season, with a few occurring in March and quite a few in May. Early reports included Lapland Longspur and Brewer's Blackbird in Stewart and Lawrence Cos., respectively, and up to 7 Short-eared Owls in Humphreys Co. Some of the highlights of the May migration included Peregrines, Purple Gallinule, and Sharp-tailed Sparrow in Stewart Co., Bachman's Sparrows in Giles and Stewart Cos., and Black-headed Grosbeak in Davidson Co. About a normal number of early and late dates of arrival and departure were reported during the season, with early swallows being perhaps the most notable among these.

The warbler migration through the region was a dull one by any standards; few reports came in of great numbers of warblers in the woods, though a few high daily species totals were reported. To bring some perspective to the migration of these species through the region, Ruth V. McMillan agreed to undertake an analysis of spring count warbler data from middle Tennessee. The results of her study (Table 1) reveal some interesting trends in the relative abundance of the various warbler species in the region over the past 26 years. Note particularly that 4 transient warblers—Tennessee, Magnolia, Bay-breasted, and Blackpoll, all probably benefiting from the outbreak of spruce budworms and gypsy moths in the northern coniferous forests—have become increasingly abundant over the past 26 years, while no warbler breeding in the region has increased. On the other hand, several warblers which breed in the region are declining in abundance on the spring counts, with the Cerulean and Redstart

being the most drastically affected. Regional observers interested in analyzing spring count data of other groups of birds for future spring reports from the region are encouraged to contact the compiler.

The volume of records submitted for inclusion in this report showed a significant increase over the volume submitted in any of the past three spring migration seasons, with many sightings reported on the "Unusual Sighting" cards available from TWRA. However, some areas of the region remain poorly represented in the following report, even though significant numbers of field observers reside in or near them. Most notable among these areas are those covered by the Highland Rim, Columbia, and Nashville Chapters of the TOS. Observers in these areas are in a position to contribute many records which will enrich our understanding of the region's birdlife and that of birds students in the decades and centuries to come. So, to the many silent fieldworkers who reside among us, let me issue a request to hear from you at the end of future seasons.

I thank the many observers who did submit records for this report, which is more the result of their work than my own. I also thank Ruth McMillan for the considerable effort which she expended in analyzing the spring warbler data presented herein. Finally, I am indebted to John C. Robinson for prompt and careful review of earlier versions of this report.

Loon—Night-Heron: Common Loon: 3 May (2) OHL (LFK), lrs. Pied-billed Grebe: 19 May (1) GRP (DTC, JPC), lrs. American Bittern: 2-6 Apr, 7 May (up to 4) CCNWR (JCR, DWB); 12 Apr - 18 May (up to 4) BEC (JCR, DWB); 27 Apr - 5 May (1) MC (DFV, CGD, CKC, *et al.*); only reports. Least Bittern: 3 May (1) marsh SE of ACI on Cumberland R. (RJM), ers (in possible breeding habitat); 4-30 May (2) BEC (JCR, CKC, *et al.*), also in suitable breeding habitat. Great Egret: through EOP (up to 3) CCNWR (JCR); 4 May (2) CCP Ponds (BHS, SJS), few WMC records; 4, 30 May (2) GSP (DTC, JPC); only reports. Snowy Egret: 4-16 May (1) MC (CGD, CKC, RJM, m.ob.); 8-12 May (1) CCNWR (JCR); 18 May (2) BEC (JCR); high number of reports. Little Blue Heron: 12 Apr (3 ad) BEC (JCR, DWB); 6 May (2 ad) BEC (JCR, DWB); 8-18 May (2 ad) CCNWR (JCR, CKC), late if not possible breeders; 22-23 May (1 second yr.) CCNWR (JCR); only reports. Cattle Egret: 3 May (5) near BEC (DWB), ers; 5 May (3) CCNWR (JCR); 26 May (1) RUC (TJW, DMM); 27 May (1) CCNWR (JCR); only reports. Green-backed Heron: 7 Apr (1) CCNWR (EJW), ers. Yellow-crowned Night-Heron: 5 Apr (5) WSB (DWB), ers; 21 Apr (1) Cheatham WMA, CHC (EJW).

Goose—Duck: Greater White-fronted Goose: 9 Mar (9) CCNWR (JCR), lrs; only report. Green-winged Teal: 10 Apr (2) CCNWR (JCR), lrs. American Black Duck: 25 May (1) GSP (DTC, JPC), lrs. Blue-winged Teal: 25 Feb (1) CCNWR (JCR), ers; 25 May (1) LWP (DTC, JPC), lrs. Northern Shoveler: 26 Apr (1) MC (SJS, CGD), lrs. Gadwall: 17 Apr (6) GSP (DTC, JPC), lrs. American Wigeon: 16 Apr (1) FRR (SJS, JCR), lrs. Canvasback: 6 Apr (1) Kentucky L., SWC (JCR), lrs. Redhead: 30 Mar (1) MOP (DCC), lrs. Ring-necked Duck: 13 Mar (317) CCNWR (JCR), max; 26 Apr (1) BEC (JCR), lrs. Lesser Scaup: 25 Mar (172) CCNWR (JCR), max; through EOP (1) MOP (WNJ *et al.*), lrs. Bufflehead: 12 Apr (3) CCNWR (JCR), lrs. Hooded Merganser: 6 May (1) CCNWR (JCR), lrs. Common Merganser: 1 Mar (17) DRU (JCR), lrs; only report. Red-breased Merganser: 6 May (1) CCNWR (JCR), lrs. Ruddy Duck: 5 Apr (2) FRR (SJS), lrs.

TABLE 1. Rank[1] of warblers on spring counts in the Highland Rim and Basin Region, 1961-1986.

SPECIES	RANK DURING YEARS 1961-70	1971-80	1981-86
Blue-winged Warbler	12	9	12
Golden-winged Warbler	29	30	30
Tennessee Warbler*	10	4	2
Orange-crowned Warbler	32	34	32
Nashville Warbler	22	18	23
Northern Parula	20	19	18
Yellow Warbler	6	7	5
Chestnut-sided Warbler	23	26	19
Magnolia Warbler*	27	27	17
Cape May Warbler	28	25	29
Black-thr. Blue Warbler	31	35	34
Yellow-rumped Warbler	1	2	3
Black-thr. Green Warbler	19	22	13
Blackburnian Warbler	26	29	26
Yellow-throated Warbler	14	17	15
Pine Warbler	30	28	28
Prairie Warbler	9	5	8
Palm Warbler	4	6	4
Bay-breasted Warbler*	25	24	14
Blackpoll Warbler	15	11	6
Cerulean Warbler***	8	15	21
Black-and-white Warbler	13	13	11
American Redstart**	16	21	24
Prothonotary Warbler	7	10	9
Worm-eating Warbler	21	20	20
Swainson's Warbler	35	33	35
Ovenbird**	18	14	25
Northern Waterthrush	24	23	27
Louisiana Waterthrush**	11	12	16
Kentucky Warbler**	5	8	10
Connecticut Warbler	35	36	37
Mourning Warbler	37	37	36
Common Yellowthroat	2	1	1
Hooded Warbler**	17	16	22
Wilson's Warbler	32	32	33
Canada Warbler	34	31	31
Yellow-breasted Chat**	3	3	7

[1]Rank determined by adding totals for each warbler on all spring counts in middle Tennessee for the period and by ranking the results (with 1 being the most abundant species and 37 the least abundant); * - species increasing in abundance; ** - species declining moderately; *** - species declining drastically.

Osprey—Falcon: Osprey: 31 Mar (1) Long Hunter S.P., DVC (RVM), ers; 24 May (3) S OVC (DJS, SJS); 25 May (1) Celina, CYC (DJS, SJS); last 2 sightings are of very late birds if not of possible breeders. Bald Eagle: 23 Mar (5 imm) DRU (JCR), last report of wintering birds. Northern Harrier: 9 Mar (24 seen simultaneously) DRU (JCR), very high number; 4 May (1) BEC (JCR); 17 May (1) Whitleyville, JAC (SDB); 21 May (1 imm) Putnam Co. (Joseph W. Wahl) lrs; very late. Sharp-shinned Hawk: 18 reports (6 Mar 25 May), double the 1985 data (mainly due to 8 reports from CCNWR). Cooper's Hawk: 16 reports (4 Mar - 26 May), also double the 1985 data (with only 1 report from CCNWR); many of the May birds were probable breeders (see Summer 86 report). Broad-winged Hawk: 5 Apr (1) FTD (JCR), ers. Golden Eagle: 5 Apr (1 imm) Model Fire Tower, LBL (DWB), only rep. Merlin: 27 Mar (1) LBL (DWB); 26 Apr (1) FTN (CGD *et al.*); only reports. Peregrine Falcon: 13 Mar (1 ad male) CCNWR (JCR); 5 May (1 ad male) CCNWR (JCR); 15 May (1 ad male) CCNWR (JCR); only reports; as JCR noted, CCNWR was definitely "THE place to be for migrating Peregrines this spring."

Turkey—Crane: Wild Turkey: 24 Mar (6) Lebanon S.F., WLC (RVM); 28 Mar (3) WSB (DWB); 6 Apr (14) Shacklett, CHC (CKC); only reports. King Rail: 5 May (1) marsh southeast of ACI on Cumberland R., CHC (RJM), only report. Virginia Rail: 29 Mar (1) MOP (BHS, DCC), ers; 6 May (1) BEC (JCR, DWB), lrs; only reports. Sora: 9 Mar (1), 12 Apr (1), 12, 17 May (1) CCNWR (JCR), first sighting ers; 29 Mar (4) MOP (BHS, DCC); 12-27 Apr (up to 6) CCSP (JCR), max; Apr-May (1) Anne Hettish Bird Sanc., RUC (ALH, DMM, TJW, Eula Kellor); 4-18 May (2) BEC (JCR). **PURPLE GALLINULE:** 18 May - EOP (1 ad) BEC (JCR, DWB, CKC), very rare in region. Common Moorhen: 31 May (1) CCNWR (DWB), only report. American Coot: 30 May (1) BEC (DWB, JCR), lrs. Sandhill Crane: 2 Mar (30), 7 Mar (22), 8 Mar (160), 9 Mar (75), 10 Mar (25) PIC (Robbie C. Hassler), only reports; according to this observer, the crane migration was "a bit above normal."

Golden-Plover—Snipe: Lesser Golden-Plover: 8 Mar (2) CCNWR (JCR, ECC, MHI, DWB), ers; 14 Mar (60) CCNWR (JCR); 15 Mar (105) DRU (CKC, MHI); 15-23 Mar (up to 192) LOR (DJS), max; 13 Apr (1) CCSP (JCR), lrs. Black-bellied Plover: 15 Mar (1) LOR (DJS), ers; 30 Mar (1) ROP (DJS); only reports (very early). Semipalmated Plover: 27 Apr (3) SWC (JCR, DWB), ers; 19 May (24) LWP (DTC, JPC), max; 25 May (11) GSP (DTC, JPC), lrs. American Avocet: 4 May (4) Cage's Bend, SUC (DRJ, DTC, JPC), 7th NA spring record. Greater Yellowlegs: 9 Mar (3) CCNWR/DRU (JCR), ers; 14 May (5) CCNWR (JCR), lrs. Lesser Yellowlegs: 8 Mar (1) CCNWR (DWB), ers; 20 May (3) CCNWR (JCR), lrs. Willet: 27 Apr (1) MC (DFV), only report. Spotted Sandpiper: 10 Apr (1) CCP ponds (SJS), ers; 31 May (1) CCSP (JCR), lrs. Upland Sandpiper: 27 Apr (1) SWC (JCR), only report. Ruddy Turnstone: 3-4 May (1) LWP (DRJ, DTC, JPC), only report; 12th NA record and first since 1979. Sanderling: 11 May (1) LWP (DTC, JPC), only report. Semipalmated Sandpiper: 27 Apr (1) CCSP (JCR), ers; 31 May (3) CCNWR (DWB), lrs. Western Sandpiper: 11 May (10) GSP (DTC, JPC), ers and max; 25 May (6) LWP (DTC, JPC), lrs. Least Sandpiper: 14 Mar (1) CCNWR (DWB), ers; 4 May (70) LWP (DRJ, DTC, JPC), max; 25 May (23) LWP and GSP (DTC, JPC), lrs. White-rumped Sandpiper: 3 May (1) near ACI (CGD *et al.*), ers; 19 May (16) LWP (DTC, JPC), max; 29 May (1) Hillsboro Pond, CFC (James R. Peters); 31

May (2) CCNWR (DWB) lrs. Baird's Sandpiper: 19, 30 May (4/4) LWP/GSP (DTC, JPC), only reports. Pectoral Sandpiper: 8 Mar (2) CCNWR (DWB), ers; 19 Mar (72) CCNWR (JCR), max; 19 May (1) LWP (DTC, JPC), lrs. Dunlin: 3 May (2) SUC (DRJ, DTC, JPC); 11-12, 25 May (2/1) LWP (DTC, JPC, CKC); only reports. Stilt Sandpiper: 12 May (1) LWP (CKC, MHI), only report. Dowitcher sp.: 11 May (22/20) GRP/GSP (DTC, JPC), max; 18 May (2) MC (DFV). Short-billed Dowitcher: 16 May (4) CCNWR (JCR), only report; this bird was noted to have "pale cinnamon color on breast and belly with whitish lower belly and undertail coverts," characteristics reasonably definitive of this species in alternate plumage (*Birding*, 15:151-166, 1983). Common Snipe: 12 Apr (77) SWC (JCR), max; 6 May (1) BEC (JCR, DWB), lrs.

Gull—Tern: Bonaparte's Gull: 3 May (1) OHL (LFK), lrs. Herring Gull: 13 Apr (1 ad) Laurel Hill L., LWC (DJS), very few LWC records. Forster's Tern: 9 Apr (4) Gray's Landing, LBL (DWB), ers; 2 May (19) CCNWR (JCR), max; 7 Jun (2) ROP (DJS), lrs. LEAST TERN: 18 May (3) CCNWR (JCR), very infrequent migrant in the region. Black Tern: 18 May (5) CCNWR (JCR), only report.

Cuckoo—Lark: Black-billed Cuckoo: 4 May (1) south-central SUC (JPC, DTC); 8 May (1) FTC (JCR); 12 May (1) CFC (MDH); 21 May (1) Bumpus Mills, SWC (DWB); only reports. **SHORT-EARED OWL:** 23, 30 Mar (5/7) DRU (JCR/CKC, ECC, MHI), only report; noted earlier at this site, but documentation not made available. Whip-poor-will: 30 Mar (1 calling) LEF (BHS), ers. Ruby-throated Hummingbird: 5 Apr (1 male) LEF (BHS), ers. Yellow-bellied Sapsucker: 3 May (1) LEF (BHS), lrs. Olive-sided Flycatcher: 26 Apr (1) LBL (JCR), ers; 24 May (4) S OVC (SJS, DJS), max; 31 May (1) near Sunrise, HIC (BHS, SJS), lrs. Acadian Flycatcher: 18 Apr (1) LEF (BHS), ers. Willow Flycatcher: 20 Apr (1 singing) WSB (DWB), ers; remarkably early. Least Flycatcher: 4 May (1) Percy Priest L. area (Audrey D. Perry, Ray Fleischer), ers; 26 May (1 singing in a small hillside orchard at c. 275 m elevation) S of Gainesboro, JAC (SJS, DJS), lrs; latter record possibly of a territorial male. Eastern Kingbird: 14 Mar (1 well seen in 'scope) Moores Ln. exit off I-65, WMC (CKC), ers; exceptionally early (within 2 days of NA early date). Scissor-tailed Flycatcher: 4 May (1 ad) Rt. 231, WLC (Kay Norris), only report. Horned Lark: reported from LWC, RUC, and SWC; see Summer 86 report.

Martin—Wren: Purple Martin: 4 Mar (1) Coleman L., DVC (LFK), ers; 10 Mar (1) Cannon Co. (James Vance, *fide* ALH). Tree Swallow: 26 Feb (4) DRU (JCR), ers. Northern Rough-winged Swallow: 17 Mar (2) MTC (JCR), ers. Bank Swallow: 30 May (1+) GSP (DTC, JPC), lrs; possibly breeding? Cliff Swallow: 27 Mar (10) CCSP (JCR), ers; 3-4 May (**3150**) CHC (CGD *et al.*), max; double the 1985 CHC max. Barn Swallow: 5 Mar (1) LOR (DJS), ers; new LWC early spring date. Blue Jay: 12 Apr (62) CCSP (JCR), max; no other reports of migrating jays were submitted although this phenomenon is easy to detect from mid- to late April. Red-breasted Nuthatch: 3 May (1) FTN (CGD *et al.*), lrs. BEWICK'S WREN: 7 Apr (1 singing) DOV (JCR), ers; see Summer 86 report. Marsh Wren: 13 Apr (1) CCSP (JCR), ers; 26 Apr - 18 May (up to 4) BEC (JCR), max (found in dry, brushy fields). Sedge Wren: 14 Mar (1) CCNWR (DWB), ers.

Kinglet—Vireo: Golden-crowned Kinglet: 9 Apr (2) LBL (JCR), lrs. Blue-gray Gnatcatcher: 6 Mar (1) PIC (J. David Hassler), ers. Swainson's

Thrush: 6 Apr (1 stunned by window) Overbrook Dr., NASH (JOE), ers; new NA early spring date. Hermit Thrush: 21 April (2) Montgomery Bell S.P., DIC (JCR), lrs. Wood Thrush: 5 Apr (1) WSB (DWB), ers. Water Pipit: 8 May (1) CCSP (JCR), lrs. Cedar Waxwing: large flocks noted in NASH (Deane McGurk) and LWC (DJS) in Mar. White-eyed Vireo: 5 Apr (2/1) FTD/WSB (JCR/DWB), ers; 6 Apr (18) LBL (JCR), notable early max. Solitary Vireo: 8 May (1) CLA (AHH), lrs. Yellow-throated Vireo: 1 Apr (1) FTD (JCR), ers. Warbling Vireo: 9 Apr (1) CCNWR (JCR), ers. Philadelphia Vireo: 22 Apr (2) WSB (DWB), ers. Red-eyed Vireo: 31 Mar (1) Dunbar Cave S.P., MTC (EJW), ers.

Warbler—Chat: Blue-winged Warbler: 6 Apr (1/1) BAS/CCNWR (DFV, KAG/DWB), ers; 4 May (1 singing a typical Golden-winged song) Boyd Mill Pk., WMC (SJS, BHS), obviously, caution is necessitated in calling Golden-winged Warblers by song; do Golden-wings sing Blue-wings' songs? Golden-winged Warbler: 9 Apr (1) WSB (DWB), ers; exceptionally early. Tennessee Warbler: 9 Apr (6) WSB (DWB), ers. Orange-crowned Warbler: 23 Mar (1) DRU (JCR), ers; 28 Mar (1) BAR (DWB); 15-22 Apr (up to 2) Oaklands P., RUC (TJW, DMM, ALH), lrs; 16 Apr (1) RDL (SJS, JCR). Nashville Warbler: 12 Apr (1) BEC (JCR), ers. Northern Parula: 27 Mar (1 well described) Rivermont Dr., Clarksville, MTC (AHH), ers; 31 Mar (1) LEF (SJS), ties NA early spring date. Black-throated Green Warbler; decidedly more uncommon than in most years; however, note increase of this species during the past 6 years (Table 1). Yellow-throated Warbler: 25 Mar (1) WSB (DWB), ers. Prairie Warbler: 6 Apr (1/4) RDL/LBL (CKC/JCR), ers. Palm Warbler: 7 May (1) CCNWR (JCR), lrs. Worm-eating Warbler: 8 Apr (1) LEF (SJS), ers. Northern Waterthrush: 20 May (1) CCNWR (JCR), lrs. Louisiana Waterthrush: 14 Mar (1) BAS (KAG), ers. Kentucky Warbler: 15 Apr (2) Model Fire Tower, LBL (DWB), ers. Connecticut Warbler: 20 May (1) BAH (RWS), only report. Mourning Warbler: 4 May (1) PWP (DFV), ers; first sighting in the Warner Parks; 15 May (1) N HIC (BHS); 15 May (1) BAH (RWS); 30 May (1) LBL (DWB); only reports. Common Yellowthroat: 28 Mar (1) BAR (DWB), ers. Hooded Warbler: 6 Apr (1) LBL (JCR), ers. Yellow-breasted Chat: 26 Apr (5) LBL (JCR), ers.

Tanager—Longspur: Scarlet Tanager: 15 Apr (1) LBL (DWB), ers; 11-24 May (1 "orange variant") RDL (*fide* ATT); 31 May (another orange variant) Dunbar Cave S.P., MTC (AHH); probably not as uncommon as originally thought by the RDL contingent. **BLACK-HEADED GROSBEAK:** 4 May (1 female) Sherwood Dr., NASH (ATT), 5th NA record and first since 1975; it should be noted that females of this species and Rose-breasted Grosbeak are less easily separable than the field guides suggest. Indigo Bunting: 21 Mar (1) LOR (DJS, Don K. Simbeck), ers (possibly an overwintering bird). **BACHMAN'S SPARROW:** 26-27 Apr (1) FTC (JCR), ers; 7 May (2 singing) Fall River, Giles Co. (DJS), returnees to last year's site. Chipping Sparrow: 14 Mar (1) CFC (MDH), ers. Vesper Sparrow: 12 Apr (3) BEC (JCR), lrs. Lark Sparrow: 21 Apr (2) Simmons Bluff Rd., WLC (RVM *et al.*), ers; 6 May (1) CCNWR (JCR), only other report of a migrant; see Summer 86 report. Savannah Sparrow: 14 May (1) CCNWR (JCR), lrs. Grasshopper Sparrow: 4 May (2) Del Rio Pike, WMC (Thomas Guschke, Mary Anne Guschke), ers. LE CONTE'S SPARROW: 9 Mar (1) CCNWR (JCR), only report. **SHARP-TAILED SPARROW:** 18 May (1) BEC (JCR), only report. Fox Sparrow: 3 May (1) LWC (DJS), lrs; very late. Lincoln's Sparrow: 28 Mar (3) BAR (DWB), ers; 14 May (2) CCNWR (JCR),

lrs. Dark-eyed Junco: 3 May (1) LWC (DJS), lrs. LAPLAND LONGSPUR: 8 Mar (3) CCNWR (DWB), only report.

Bobolink—Grosbeak: Bobolink: 21 Apr (2) WLC (RVM *et al.*), ers; 28 May (3) CCNWR (JCR), lrs. Rusty Blackbird: 4 May (1) SUC (DTC, JPC), lrs. BREWER'S BLACKBIRD: 7 Mar (2) St. Joseph, LWC (DJS), only report. Orchard Oriole: 9 Apr (2) 3 WSB (DWB), ers. Northern ("Baltimore") Oriole: 26 Apr (2/1) LBL/NASH (JCR, DWB/Paul B. Hamel), ers. Purple Finch: 18 May (1) Dunaway Dr., NASH (John N. and Heather Riggins), lrs; new NA late spring date. Pine Siskin: 15 May (1) N of Westpoint, LWC (DJS), very late for LWC; 22-23 May (2) Tullahoma, CFC (MDH), also very late; 27 May (1) DOV (JCR), lrs. Evening Grosbeak: 16 May (1) Lawndale Dr., Murfreesboro, RUC (ALH); 23-24 May (1) Old Fort St., Tullahoma, CFC (Chloe and Howell Peebles), lrs.

Corrigenda: Migrant 55:69, 1984: delete the entry for American Black Duck; *Migrant* 55:70, 1984: at the end of the entry for Bewick's Wren change "WLC (RVM)" to "RUC (RVM)"; *Migrant* 56:75, 1985: in the entry for Red-breasted Merganser change "23 May" to 23 Mar"; *Migrant* 56:76, 1985: in the entry for Bonaparte's Gull change "16 May" to "16 Mar" and in the entry for Ring-billed Gull at FRR change "11 May" to "11 Mar."

Addenda: Reports from this region were never submitted for the following seasons: Spring 80, Summer 80, Fall 80, Spring 82, and Summer 82. A number of important records occurred during those seasons and have subsequently come into the current compiler's hands. They are presented here, in the order of the 6th edition of the AOU Check-List, as a partial replacement for these missing reports. Some of the records are from the 1982 TOS Foray to White County, which covered both the Cumberland Plateau and Highland Rim portions of the county. Records from both physiographic regions are presented here. Should other important missing records be forthcoming, they, too, will be included in future addenda to this report.

American Bittern: 14 Jun 1980 (3) Goose Pond, Grundy County (Dan Jacobson, m.ob.), nesting suggested. Least Bittern: 14 Jun 1980 (2) Goose Pond, Grundy County (Dan Jacobson, m.ob.). Little Blue Heron: 1-16 Jun 1982 (2 ad) MC (DFV). Cattle Egret: 14 Apr 1980 (1) Old Hickory L. (LFK); 19 Apr 1982 (2) Madison, DVC (Richard Rimmer). Yellow-crowned Night-Heron: 28-31 May 1982 (2) Great Falls, WHC (TOS). WHITE IBIS: 1-2 Aug 1980 (2) Coleman L., DVC (LFK); 4-17 Aug 1980 (1) PPL (Audrey D. Perry). Blue-winged Teal: 25, 31 Jul 1980 (2 ad, 1 3/4 grown y) LWP (DTC, JPC), possible nesting indicated; 28 Jul 1982 (1) MC (DFV). Redhead: 24 May 1980 (1) Cedar Hill L., Madison, DVC (Richard Rimmer), new NA late spring date. Surf Scoter: 3 Apr 1980 (1 ad male) MC (DFV); from beginning of period until 27 Apr 1982 (1 imm male) RDL (CGD, m.ob.), new NA late spring date. **MISSISSIPPI KITE:** 22 Aug 1980 (1) Opryland, NASH (Margaret L. Mann), 4th NA record. Bald Eagle: 31 Mar 1982 (1) RDL (NTOS), few records at this locale; 8 May 1982 (1 imm) Gallatin (DTC, JPC, m.ob.). Cooper's Hawk: 28-31 May 1982 (2) WHC (TOS). Broad-winged Hawk: 24 Jun 1980 (2 ad, 2 y in nest) GSP (CPN, DTC, JPC), left nest 4 Jul 1980. Ruffed Grouse: 1 Jun 1980 (1) PIC (RCH); 28-31 May 1982 (1) Virgin Falls, WHC (TOS). Wild Turkey: 1 Jun 1980 (2) PIC (RCH). Sandhill Crane: 16 Mar 1980 (30) PIC (RCH); 18 Mar - 2 Apr 1980 (1) Dilton-Mankin Rd., RUC (ALH); 18 Mar 1982 (76) PIC (RCH); 31 May - 6 Jun 1982 (1) Curry Lane, NASH and Joelton, DVC (Joseph Martin, *fide*

Robert M. Hatcher), a sick or injured bird probably involved, as bird found dead last date. Spotted Sandpiper: 21 Jun 1980 (1 ad, 1 y) MC (DFV); 1 Jul 1982 (2 ad, 1 y) MC (DFV). **MARBLED GODWIT:** 26 Apr 1980 (2) MC (F. Joseph McLaughlin, m.ob.), 3rd NA record. Dunlin: 25 May 1980 (24) GSP (DTC, JPC). Buff-breasted Sandpiper: 6 Sep 1980 (**21**) CCNWR (Jeff Wilson, Joe Guinn), very large number. Common Snipe: 14 Jun 1980 (1) MC (DFV), few NA summer records. Wilson's Phalarope: 25 May 1980 (1) GSP (DTC, JPC); 6 Sep 1980 (1) CCNWR (Jeff Wilson, Joe Guinn). Monk Parakeet: 18 May 1980 (1, photos) Louisiana Ave., NASH (Dan Jacobson, m.ob.), probable escape. Ringed Turtle Dove: 8 Jun 1980 (2 ad, 1 y, nest with 3 eggs) Overton Rd., NASH (Dan Jacobson, m.ob.). Horned Lark: 28-31 May 1982 (3) WHC (TOS). Brown Creeper: 14 Jun 1980 (1) Love Circle, NASH (Jan C. Alexander); 17 Jul (1) Acklen Ave., NASH (F. Joseph McLaughlin); few NA summer records. Bewick's Wren: 24-25 Jun 1980 (1/1) Trousdale Co./Smith Co. (CPN); 8 Jul 1980 (1) 2 mi SE of Palmyra, MTC (David Snyder). Loggerhead Shrike: 28-31 May 1982 (15) WHC (TOS). Solitary Vireo: 28-31 May 1982 (1) WHC (TOS). Prothonotary Warbler: 18 May 1980 (pair nesting) PIC (RCH). Swainson's Warbler: 30 Apr 1980 (1 injured, recovered, banded) Austin Peay State Univ., MTC (David Snyder); 28-31 May 1982 (1) S of De Rossett, WHC (TOS). Black-throated Green Warbler: 28-31 May 1982 (5) WHC (TOS). Dickcissel: 28-31 May 1982 (5) WHC (TOS). Grasshopper Sparrow: 28-31 May 1982 (7) WHC (TOS). Song Sparrow: 28-31 May 1982 (**120**) WHC (TOS). Northern ("Baltimore") Oriole: May 1980 (singing male, nest) near Port Royal, MTC (Joe D. Allen); 28-31 May 1982 (1) WHC (TOS).

Locations: ACI - Ashland City, Cheatham Co.; BAH - Barnes Hollow, Putnam Co.; BAR - Barkley Waterfowl Management Unit, Stewart Co.; BAS - Basin Spring, Williamson Co.; BEC - Bear Creek Wildlife Management Unit, Stewart Co.; CCNWR - Cross Creeks National Wildlife Refuge, Stewart Co.; CCP Ponds - Carter's Creek Pike Ponds, Williamson Co.; CCSP - Cumberland City Steam Plant, Stewart Co.; CFC - Coffee Co.; CHC - Cheatham Co.; CYC - Clay Co.; CLA - Clarksville, Montgomery Co.; DIC -Dickson Co.; DOV - Dover, Stewart Co.; DRU - Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co.; FRR - Franklin Reservoir, Williamson Co.; FTC - Fort Campbell Military Reservation, Montgomery and Stewart Cos.; FTD - Fort Donelson National Military Park, Stewart Co.; FTN - Fort Negley, Davidson Co.; GRP - Green's Pond, Sumner Co.; GSP -Gallatin Steam Plant, Sumner Co.; HIC - Hickman Co.; JAC - Jackson Co.; LBL - Land-Between-The-Lakes, Stewart Co.; LEF - Leiper's Fork, Williamson Co.; LOR - Loretto, Lawrence Co.; LWC - Lawrence Co.; LWP -Lewis Pond, Sumner Co.; MC - Metro Center, Davidson Co.; MOP - Monsanto Ponds, Maury Co.; MTC - Montgomery Co.; NA - Nashville Area (includes all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, and Wilson Cos., as well as parts of Dickson and Trousdale Cos.); NASH - Nashville; OHL - Old Hickory Lake (in Davidson, Smith, Sumner, Trousdale, and Wilson Cos.); OVC - Overton Co.; PIC - Pickett Co.; PWP -Percy Warner Park, Davidson Co.; RDL - Radnor Lake State Natural Area, Davidson Co.; ROP - Robertson Pond, Lawrence Co.; RUC - Rutherford Co.; SUC - Sumner Co.; SWC - Stewart Co.; WHC - White Co.; WLC - Wilson Co.; WMC - Williamson Co.; WSB - Wiley's Spring Bay, Stewart Co.

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EASTERN RIDGE AND VALLEY REGION—The whole region is continuing to experience the effects of an extended drought. How this will affect the region's avifauna only time will tell. With this thought in mind, observers should watch very closely for the results and then report their impressions to the compilers. With our network of astute fieldworkers, comments will certainly be welcomed as we attempt to evaluate the effects of the weather.

In the Johnson City area, Glen Eller commented that during March, only 1.8 inches of rain was recorded, and in April, 0.9 inches. May rainfall was near normal, but it was very hot and humid. Knoxville experienced the driest spring on record, with 1.7 inches of rain in March, 2.3 inches in April, and 3.8 inches in May. Most of the May rainfall came during the last third of the month. March and May temperatures were near normal, while April was a few degrees below normal. The last frost at Knoxville was on 10 May, much later than average. At Chattanooga, the rainfall deficit measured 10 inches for the period and average temperatures were above normal during the period.

Waterfowl seemed to have moved through the region in normal fashion, as few comments were received as to their status.

The Blythe Ferry section of the Hiwassee River Area is rapidly gaining in importance for migrating Sandhill Cranes. Large numbers of cranes fed and roosted there in late February, and more birds were present in March. Before they departed, numbers peaked at 300 birds. Other sections of Hiwassee River Area, such as Armstrong Bend, Gunstocker, Candies, South Mouse and Rogers Creeks are probably equally utilized by cranes, but have not had the benefit of adequate documentation. For this reason, all observations should be reported. With the impinging human development all along the migration route, these locations will certainly gain in importance with each passing season.

Shorebirds are an interesting story. Under normal conditions, all of the TVA reservoirs are filled by the time the main spring migration has commenced. Thus, other than at Kingston Steam Plant, there is very limited available habitat. This season, mainstream reservoirs did not reach full summer pool levels until early June. While there was plenty of shoreline habitat available during the May migration period, most of the sites were too dry for the shorebirds. In late May, some birds were attracted to Savannah Bay mudflats and a few other areas when it rained.

There was a lack of strong frontal systems during the season, and, as a consequence, the passerine migration was unspectacular. Most of the birds arrived on schedule, with many of the later migrants not lingering as long as usual. As expected, individuals from last winter's northern finch invasion lingered into May, with some Pine Siskins still coming to a feeder on Signal Mountain at the end of the period.

Loon—Duck: Common Loon: 1-23 Mar (2-9) CHL (m.ob.); 16 Mar (2) FLL (KTOS); 1-2 Apr (2) FLL (PSP); 21 Apr (1) CHL (KHD); 13 May (1) BOL (RLK). Pied-billed Grebe: 1-16 May (4-37) CHL (m.ob.). Horned Grebe: 1-23 Mar (2-6) CHK (m.ob.). Double-crested Cormorant: 31 Mar (1) Maclellan Island, CHA (CDB); 12 Apr (8) FLL (PSP); 16 Apr (1) BOL (RLK); 26 Apr, 4 May (5) DOL (JAK); 10 May (2 flying N) KNX (MWA, LNA); 13 May (1) AUS (RLK). Great Egret: 1 Apr (1) CHL (KHD); 10, 24 Apr (1) AUS

(RLK); 31 May (1) POC (JCW). Snowy Egret: 16 Apr (1) BOL (RLK). Black-crowned Night-Heron: 24 Apr (3) CHA (Randall L. Doyle, Linda Kay Doyle). Green-winged Teal: 3 May (300) HRA (KHD, LHD); 16 Apr (1) JNB (RLK). Am. Black Duck: 3 Mar (8) HRA (KHD, LHD). Mallard: 10 Mar (nest w/14 eggs) SAB (KHD). Northern Pintail: 26 May (1) HRA (KHD, LHD, RCS). Blue-winged Teal: 9-23 Mar (20-40) HRA (KHD, LHD); 4 May (2) KSP (KHD, LHD). Northern Shoveler: 4-12 May (1) KSP (KHD, LHD). Gadwall: 9 Mar (60) CHL (KHD); 15-28 Apr (1-10) SAB (KHD, LHD); 12 May (1) KSP (KHD, LHD). American Wigeon: 9-16 Mar (1-15) CHL (KHD, LHD); 2 Apr (1) HRA (KHD, LHD). Canvasback: 9 Mar (1) CHL (KHD, LHD). Redhead: 2-16 Mar (6-75) CHL (KHD, LHD). Ring-necked Duck: 2-23 Mar (1-211) CHL (KHD, LHD). Greater Scaup: 2-16 Mar (2-240) CHL (KHD, LHD). Lesser Scaup: 2-16 Mar (100-266) CHL (KHD, LHD); 4-12 May (4) KSP (KHD, LHD). Common Goldeneye: 2 Mar (2) CHL (KHD). Bufflehead: 4-23 Mar (4-16) CHL (KHD, LHD). Hooded Merganser: 9 Mar (31) HRA (KHD, LHD). Red-breasted Merganser: 16 Mar (28) CHL (KHD, LHD); 21 May (1) CHL, HLC (CPN). Ruddy Duck: 2-23 Mar (8-67) CHL (KHD, LHD).

Vulture—Merlin: Black Vulture: 30 Mar (nest, 2 eggs) Armstrong Bend, MEC (Paul H. Dietrich), same site as 1985 nesting. Osprey: 15 Mar (pair at nest) HRA, navigation light at Tenn. River Mile 501.3 (BJT); 11 Apr - 7 May (1+) BOL (LHTOS); 24 May (1) Catoosa WMA, CUC (JCR). Bald Eagle: 10 Mar (1) Watts Bar L. (T. Edward Beddow); 16 Mar (4) HRA (BJT); 20 Mar (1) Jefferson City (PSP); 21 Mar (1 imm) BOL (RLK). Sharp-shinned Hawk: 15 May (1) SPW (GWM); 17 May (1) NOR (CPN) - both of these late migrants or breeding birds. Red-shouldered Hawk: total of 11 sites were active out of 17 new and old locations checked in Bradley, Meigs, Hamilton, Marion, McMinn, Rhea and Walker Co., Georgia (KHD, PGM, James D. Rowell, RAR). Broad-winged Hawk: 11 Apr (1) AUS (LHTOS). Red-tailed Hawk: active nest BYC (PGM, JDL); active nest Blythe Ferry, MEC (CWC). American Kestrel: nesting again White Pine, JEC (JAK); active nest w/4 young BYC (JDL, PGM). Merlin: 1 Apr (1) SPW (GWM); 3 May (1) KNX (ARH *et al.*).

Sora—Tern: Sora: 13, 21 Apr (2) AUS (RLK); 24 Apr (1) Alcoa Marsh (JAK). Sandhill Crane: 3-13 Mar (up to 300) HRA (CWC); 3 Apr (3) MEC (JCW); 16 May (1) S. Mouse Cr., HRA (Dan N. Williams). Black-bellied Plover: 23 May (1) KNC (MWA, LNA). Lesser Golden-Plover: 15 Mar (1) AUS (RLK); 17 Mar (2) SAB (LHD); 11 Apr (1) SAB (LHD, Rick Waldrop). Semipalmated Plover: 8 May (3) JNB (RLK); 19-31 May (1-4) SAB (LHD, KHD, RCS); 25 May (1) KSP (LHD, ACD, SLW, KHD). American Avocet: 26 Apr (4) Graysburg Hills Golf Course, GNC (Howard H. Earnest, Sr.); 28 Apr (25) Cherokee Lake (Mike Smith, *fide* LJF). Greater Yellowlegs: 15 Mar - 9 May (1+) AUS (RLK); 25 Apr (7) SAB (KHD). Lesser Yellowlegs: 18 Mar (1) SAB (LHD); 24 Apr (82) HRA (C. Richard Hughes); 28 Apr (28) SAB (LHD); 12 May (1) HRA (KHD, LHD). Willet: 24 Apr (27) SAB (KHD, LHD). Spotted Sandpiper: 24 May (1) BLC (JAK), lrs. Upland Sandpiper: 16 Apr (1), 20 Apr (2) KNC (MWA, LNA, RDH, ARH). Semipalmated Sandpiper: 5-16 Mar (1) SAB (KHD, LHD); 24 May (22) BLC (JAK); 25 May (100) KSP (LHD, ACD, SLW); 20-31 May (2-75) SAB (KHD, LHD, RCS). Western Sandpiper: 21 May (1) AUS (RC). Least Sandpiper: 19-22 May (8-9) SAB (KHD, LHD); 25 May (10) KSP (LHD, ACD, SLW, KHD). White-rumped Sandpiper: 25 May (10) KSP (LHD, ACD, SLW, KHD); 26 May (5) SAB (LHD, RCS, KHD). Baird's Sandpiper: 21 May (1) AUS (RC). Pectoral

Sandpiper: 8-23 Mar (3-25) SAB (LHD); 15 Mar - 1 May (1-12) WGC (RLK *et al.*) - this represented a good migration for the area. Dunlin: 1-23 Mar (23-65) SAB (KHD, LHD); 24-25 May (1) KSP (MWA, LHD, ACD, SLW). Common Snipe: 1-23 Mar (6-57) SAB (KHD, LHD). American Woodcock: 3 Mar (6 singing) Amnicola Marsh, HLC (Paul C. Harris, R. John Henderson). Laughing Gull: 13 Mar (1 ad) Fort Loudoun Dam (JAK). Bonaparte's Gull: 9 Mar (2) CHL (KHD, LHD); 8 Apr (14) SAB (LHD); 16 Apr (1) BOL (RLK). Ring-billed Gull: 11 May (1) BOL (RLK); 22 May (9) CHL (CPN). Caspian Tern: 16 Apr (1) AUS (RLK), second ELI area spring record. Common Tern: 26 Apr (2) DOL (JAK). Forster's Tern: 24 Apr (7) FLL (PSP); 26 Apr (3) AUS (RLK, RC).

Barn-Owl—Nuthatch: Common Barn-Owl: bad news from White Pine, JEC. A nest tree used for over 20 years was cut, 2 young owls removed and given to TWRA; other know roost locations destroyed when a shed was torn down, and a tree limb blew down (JAK). Great Horned Owl: 24 Mar (active nest) Rogers Creek, McMinn Co. (KHD, LHD). Red-headed Woodpecker: 26 Mar (1) Summit, Hawkins Co. (Daniel J. Nieves); 16 Apr (1) JNC (RLK) - only reports. Olive-sided Flycatcher: 9 May (1) KNX (JCH, A. Boyd Sharp). Willow Flycatcher: 11 May (1) AUS (RLK), ers; 24 May (1) Roaring Fork Cr., GNC (WRN); 26 May (3) southern Fentress Co. (CPN). Least Flycatcher: 18 May (1) Cross Mountain, Campbell Co. (CPN). Horned Lark: 18 Apr (2 at nest) Grassy Cr., GNC (WRN); 23 May (1) UT Plant Sciences Farm, KNC (MWA), first breeding season report from this locality in some years; several on territory near Heritage High School, BLC (JAK). Tree Swallow: 1 Apr - 18 May (1+) WGC (LHTOS); 24 May (pair nesting in bluebird box) UT Plant Sciences Farm, KNC (MWA), first county nest record; 26 May (1) west Morgan Co. (CPN), probable nesting; pair again at DOL site (JAK). N. Rough-winged Swallow: 11 Mar (1) Maryville (JAK); 11 Mar (1) Raccoon Mountain, Marion Co. (LJF), ers. Cliff Swallow: 5 May (several at old nests) Goodfield Branch embayment, MEC (CPN); 6 May (8 new nests) TN 58 at Wolftever Cr., HLC (CPN) - first published reports from each location. Red-breasted Nuthatch: present in Knoxville area until at least 14 May (1) (JCH).

Gnatcatcher—Warbler: Blue-gray Gnatcatcher: 27 Mar (1) SPW (GWM). Veery: 30 May (1) KNX (JCH), late. Swainson's Thrush: 8 May (1) JNC (RLK) - only report from this area; 25 May (1) KNX (JCH), lrs. Hermit Thrush: 28 Apr (1) WGC (RLK), lrs. Water Pipit: 5-8 Mar (250-300) SAB (KHD, LHD); 26 Apr (90+) Tri-Cities Airport, Sullivan Co., (MD, Joy Kyle); 5 May (1) AUS (RLK); 11 May (4) KSP (MWS, LNA). Cedar Waxwing: 3 Mar (350) CHA (RAR); 16-23 May (10-20) Cravens House, Lookout Mtn. (KHD), feeding on ripening mulberries. Loggerhead Shrike: pair regular JNB (RLK *et al.*); 25 Apr (2 ad, 3 y) Hickory Valley Golf Course, CHA (RAR); 10 May (2 ad, 3 y) Snow Hill, HLC (KHD, LHD); 17 May (2 ad, 3 y) Davidson Rd., CHA (RAR). White-eyed Vireo: 5 Apr (1) KNX (RDH, ARH), ers. Solitary Vireo: 11 Mar (1) Raccoon Mt., Marion Co. (LJF), ers; 25 May (1) KNX (JCH), late report from non-breeding locale. Warbling Vireo: 28 Apr (1) SPW (GWM). Philadelphia Vireo: 13 May (1) JNC (SG). Red-eyed Vireo: 4 Apr (1) KNX (ARH, RDH), ers. Blue-winged Warbler: 7 Apr (1) SPW (GWM), ers; 5-31 May (1) CHA (RAR), first report of one singing on territory in HLC. "Brewster's" Warbler: 3 May (1) SPW (GWM); 4 May (1) KNX (James M. Campbell, Betty Reid Campbell, Frank L. Bills, RDH). Orange-crowned Warbler: 27 Apr (1) CHA (PDR). Black-throated Blue

Warbler: 5 Apr (1) KNX (ARH), very early; 9 May (1), 13 May (2) SPW (GWM). Blackburnian Warbler: 5 Apr (1) KNX (ARH), early. Blackpoll Warbler: present in lower than average numbers in KNX area (CPN); 26 May (1) HRA (KHD, LHD, RCS), late. Black-and-white Warbler: 30 Mar (1) KNX (ARH, RDH), about average arrival. Worm-eating Warbler: 5 Apr (1) KNX (ARH, RDH), early. Ovenbird: 5 Apr (1) KNX (ARH, RDH), early. Connecticut Warbler: 24 May (1) BLC (JAK). Mourning Warbler: 22 May (1) KNX (JCH); 24 May (1) BLC (JAK). Hooded Warbler: 5 Apr (1) KNX (ARH, RCH), early. Wilson's Warbler: 8 May (1) KNX (CPN). Canada Warbler: 24 May (1) Catoosa WMA, CUC (JCR).

Grosbeak—Grosbeak: **ROSE-BREASTED GROSBEAK:** first 26 Apr (1) KNX (ARH, RDH, MWA, LNA), then migrants were present in low numbers; 11 May (**pair building nest**) Frozen Head, Morgan Co. (CPN); 23 May (2) HLC (KHD). Vesper Sparrow: 23 Mar (8 singing) HRA (KHD, LHD). Grasshopper Sparrow: 26 May (1) SE Putnam Co., (5) west Fentress Co., (1) west Morgan Co. (CPN). White-throated Sparrow: 20 May (1) KNX (James Mason), lrs. Bobolink: more reports than normal, from Knox, Anderson, Scott, Roane and Claiborne counties (MWA, ARH, LJF, CPN, GWM *et al.*). Purple Finch: 9 May (1) KNX (ARH); 23 May (1) JNC (MD), lrs. House Finch: several reports of young birds in JNC after mid-May (LHTOS); at CHA, winter flocks dispersed in March, and pair observed copulating on 24 Apr (RAR); 26 May (nest, 2 y and 3 eggs) SAB (KHD). Pine Siskin: 26 May (1) Oak Ridge (Wesley K. James); at feeder on Signal Mt. numbers ranged to 100+ at end of April, with lingering individuals noted to 31 May (JSL). Evening Grosbeak: 1 May (7) SPW (GWM); 4 May (3) KNX (KTOS); 10 May (1) JNC (SG); end of April numbers up to 100+ at feeder on Signal Mt., last date there 10 May (JSL).

Locations: AUS - Austin Springs, Washington Co.; BLC - Blount Co.; BOL - Boone Lake; BYC - Bradley Co.; CHA - Chattanooga; CHL - Chickamauga Lake; CUC - Cumberland Co.; DOL - Douglas Lake; FLL - Fort Loudoun Lake; GNC - Greene Co.; HLC - Hamilton Co.; HRA - Hiwassee River Area; JEC - Jefferson Co.; JNC - Johnson City; JNB - Jonesborough, Washington Co.; KSP - Kingston Steam Plant, Roane Co.; KNC - Knox Co.; KNX - Knoxville; MEC - Meigs Co.; NOR - Norris, Anderson Co.; POC -Polk Co.; SAB - Savannah Bay, Hamilton Co.; SPW - Speedwell, Claiborne Co.; WGC - Washington Co.

KENNETH H. AND LILLIAN H. DUBKE, 8139 Roy Lane, Ooltewah, TN 37363.

EASTERN MOUNTAIN REGION—The drought continued into this period, with monthly rainfall totals of 1.82 inches, 0.92 inches, and 4.88 inches for the months of March through May. The spring rainfall total was about 7 inches below normal. The most exciting find of the period was a Clapper Rail which was captured, held, and released in Elizabethton. If accepted by the TOS Certification Committee, this will be the first state record of this species.

Loon—Merganser: Common Loon: 18 Apr (1) LR (BHS, JCR), last report. Horned Grebe: 26 Apr (3, with 1 in breeding plumage) RNC (GDE, HHF), last report. Green-backed Heron: 13 Apr (1) ELI (HHF), first report. Yellow-crowned Night-Heron: first 27 Mar (1) ELI (GOW); 31 Mar (2 on nest) ELI (GDE). Canada Goose: brood of 5 y fledged at WGI (*fide* GDE).

Northern Pintail: 14 Mar (5) WTL (RC), last report. Blue-winged Teal: present in ELI area 21 Mar - 1 May (LHTOS). Northern Shoveler: 26 Apr (1) RNC (GDE, HHF); 21 May (3) WTL (MD, SG, CFW). Canvasback: 21 Mar (3) WTL (MD, SG, CFW). Lesser Scaup: 26 Apr (3) RNC (GDE, HHF), last report. Hooded Merganser: 17 Mar (2) RIL (GDE), last report. Red-breasted Merganser: 26 Apr (26) RNC (GDE, HHF).

Osprey—Swift: Osprey: present in ELI area 12 Apr - 7 May (LHTOS). Sharp-shinned Hawk: 8 May (1) TEL (RLK), only report since 12 Mar. Cooper's Hawk: 18 Apr (1) LR (BHS, JCR), last report. Red-shouldered Hawk: 24 May (1) GSMNP (RLK). Broad-winged Hawk: 13 Apr (2) RIL (GDE), first report. PEREGRINE FALCON: 3 young hacked in GSMNP during May (RLK *et al.*). Merlin: 9 Apr (1) LR (BHS, JCR). Wild Turkey: 26 May (1 ad with y) Shady Valley, Johnson Co. (Edward H. Schell). Sora Rail: 26 Apr (1) ERW (RPL, GWS). **CLAPPER RAIL:** 8 Apr (1 captured, released 17 Apr) ELI (GOW *et al.*), photographed, Round Table Note to be submitted. American Woodcock: 17 May (1) RNM, 5200 ft. elev. (RLK). Forster's Tern: 26 Apr (8) RNC (GDE, HHF); 4 May (4) WTL (RC). Black-billed Cuckoo: 3 May (2) ELI (LHTOS), first report. Common Barn-Owl: 1-2 pairs at SHL area (*fide* GDE). Great Horned Owl: 2-3 pairs at SHL area (*fide* RPL). NORTHERN SAW-WHET OWL: 17 May (1) RNM (RLK). Chuck-will's-widow: 9 Apr (1) SHL (RPL), early. Chimney Swift: 7 Apr (3) ELI (HHF), first report.

Flycatcher—Vireo: Least Flycatcher: 3 May (5) RNM (LHTOS), first report. Alder Flycatcher: 17 May (6 singing males) RNM, elev. 5200+ ft. (RLK). Purple Martin: 9 Mar (2) ELI (*fide* GDE). Tree Swallow: 16 Mar (2) RNM, 5200 ft. elev. (RLK), first report. Common Raven: 20-26 May (2 ad, 4 y) GSMNP (RLK). House Wren: 13 Apr (1) ELI (HHF). Veery: first 3 May (4) RNM (LHTOS). Swainson's Thrush: 14 May (1) SHL (RPL), first report. Hermit Thrush: 17 May (1 singing) RNM, elev. 5200+ ft. (RLK). Water Pipit: 21 Mar (20+) WGI (SG). White-eyed Vireo: 10 Apr (1) SHL (RPL), first report, early. Yellow-throated Vireo: 6 Apr (1) SHL (RPL), first report, early. Warbling Vireo: 25 Apr (10 SHL (RPL).

Warbler—Grosbeak: Blue-winged Warbler: 17 May - EOP (1 territorial male) SHL (RPL). Golden-winged Warbler: 3 May (3) RNM (LHTOS), first report. Northern Parula: 15 Apr (1) RNC (SG), first report, early. Yellow-rumped Warbler: 13 May (1) ELI (HHF), last report. Pine Warbler: first 14 Mar (1) WTL (RC). Louisiana Waterthrush: 3 Mar (1) TEL (PIK), very early. Mourning Warbler: 24 May (1) SHL (RPL). Blue Grosbeak: 26 Apr (1) ELI (GDE, HHF), first report. Grasshopper Sparrow: first 1 May (2) PWB (RC). Fox Sparrow: 21 Mar (1) ERW (GWS), last report. Bobolink: 7-13 May (7-11) PWB (RC). Purple Finch: last 26 Apr (2) ELI (GDE, HHF). House Finch: 10 May (nest, fledged 4 y) ELI (HHF). Red Crossbill: 14 Mar (1) WTL (RTC); 20 Apr (1) GSMNP (CPN *et al.*). Pine Siskin: 24-25 May (1) GSMNP (RLK); 2 May - EOP (3) ERW (GWS). Evening Grosbeak: 13 May (2) ELI (*fide* GDE).

Locations: ELI - Elizabethton; ERW - Erwin, Unicoi Co.; GSMNP - Great Smoky Mountains National Park; LOR - Look Rock, Blount Co.; PWB - Powder Branch, Carter Co.; RIL - Ripshin Lake, Carter Co.; RNC -Roans Creek area of Watauga Lake, Johnson Co.; SHL - South Holston Lake, Sullivan Co.; TEL - Tellico Ranger District, Cherokee Nat. Forest; WGI - Wagner's Island, Carter Co.; WTL - Watauga Lake.

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AN ANALYSIS OF SPRING BIRD COUNTS IN TENNESSEE

James T. Tanner

The local chapters of the Tennessee Ornithological Society have long had a tradition of devoting one or two days during the peak of the spring migration to observing and recording the number of birds in their area. The results of these Spring Field Days (bird counts) have been published annually in THE MIGRANT. This provides an opportunity to measure the relative abundance of spring migrants across the state and to investigate the question of whether or not there have been any changes in abundance over the years. This last is a pertinent question today because it has been suggested that clearing of forests in Central and South America and habitat changes in North America are affecting the numbers of some species (Wilcove 1985).

A span of 25 years, 1961 through 1985, and the reports from 7 localities were chosen for this investigation. In West Tennessee are Memphis with 19 spring counts and Reelfoot with 13; these localities had fewer counts than the other areas because they were made by members of the Memphis chapter who in some years worked in only one of the two areas. In Middle Tennessee are Columbia with 24 years and Nashville with 23 years. In East Tennessee are Chattanooga with 21 years, Knoxville with 25 years, and Elizabethton with 24 years.

METHODS OF ANALYSIS

The number of each species reported seen on the count day must be adjusted to some base if the numbers are to be compared between localities and years. The number reported depends on both the amount and efficiency of effort (number of observers, area covered, hours in the field, weather) and the abundance of the species on the count day. Of course we have no accurate measure of the true abundance. In a similar analysis of the Christmas Bird Counts (Tanner 1985), the reported numbers were adjusted to the base of numbers per 50 party-hours. Spring bird counts, however, are not as highly organized as Christmas Bird Counts. The spring counts were usually made in one day but occasionally over two days. The areas covered varied from being quite small to parts of two or more counties. The reports of the spring counts rarely included the number of party-hours, and often did not give the number of observers nor the time in the field. After a few trials, I decided that the anount of effort devoted to a count could be measured by the total number of individual birds of all species reported. This total included both resident and migrant species, but did not include the numbers of European Starlings, Common Grackles, and Brown-headed Cowbirds

because these three species fluctuated widely, the number observed being highly influenced by the presence or absence of communal roosts in the count areas.

The total number of individual birds was found to be a linear function of the number of observers. The slope of the relation is 250 birds per observer. Since the total number across all localities and years was about 5000, that number was chosen as the base. The adjusted number for each species equals the number reported multiplied by (5000 divided by the total number of individual birds in that count).

The effectiveness of standardizing to the total number of individual birds was tested by including in the analysis some permanent residents believed to be sedentary, one being the Northern Cardinal. The reported number of cardinals in the 23 Nashville counts had a mean of 358 birds, a standard deviation of 119, and a coefficient of variation (standard deviation divided by the mean) of 33%. After the numbers were adjusted these measurements were respectively 225, 40, and 18%, the latter being reduced by almost half of the unadjusted measure. The other permanent residents included were the Downy Woodpecker, Carolina Chickadee, Tufted Titmouse, and Carolina Wren. For the five permanent residents, coefficients of variation were calculated separately for the Christmas Bird Counts (number standardized to 50 party-hours), and spring bird counts (numbers adjusted to 5000 of the total). There were only small differences between species, between localities, and between Christmas and spring counts. The only trend was a negative correlation between the coefficient of variation and the number of observers; more observers reduces the variation.

Summarizing the above three paragraphs: The method of adjusting the number observed to a base of 5000 total observed individuals (excepting the starlings, grackles, and cowbirds) appears to be a reasonably satisfactory method for standardizing the data.

FREQUENCY AND ABUNDANCE OF SPRING MIGRANTS

Table 1 summarizes the frequency and abundance of 82 species of birds at seven locations in Tennessee as reported in the spring bird count records. Excluded from this table are permanent residents, winter residents unless they winter more abundantly to the south of Tennessee, and species infrequently observed (less than 50% of the counts at every locality).

Frequency is reported as the percent of the times that the bird was listed for that locality. Only 15 species had frequencies greater than 90% in all localities.

The abundance of each species is reported as an average of the adjusted number. The average is the median, the middle number in the sense that reports higher or lower than the median are equally common. The median in Table 1 applies only to the times when that bird was present, i.e., zeroes were not counted in computing the median. If the figures in the table are examined by species, the numbers for frequency and abundance will be seen to vary usually in parallel.

The seven migrant species that are most abundant in the spring bird counts in Tennessee are in descending order: Chimney Swift, Barn Swallow, Indigo Bunting, Blue-gray Gnatcatcher, Purple Martin, Yellow-rumped Warbler, and Red-eyed Vireo.

TABLE 1. Frequency and abundance of migrant birds in Spring Bird Counts in Tennessee. F: frequency in percent of counts that each species has been reported. N: median number of individuals per 5000 of all species. Species followed by an asterisk have changed in abundance as described in the text. In the last column E indicates an early migrant, L a late migrant, as described in the text.

	Memphis		Reelfoot		Columbia		Nashville		Chattanooga		Knoxville		Elizabethton		Early/
	F	N	F	N	F	N	F	N	F	N	F	N	F	N	Late
Green-backed Heron*	79	6	92	8	96	14	100	15	100	21	100	7	96	12	
Broad-winged Hawk	79	6	62	2	85	5	100	3	81	11	84	4	83	8	
American Kestrel	37	3	62	4	96	15	100	12	86	4	92	2	100	5	
Greater Yellowlegs	47	6	77	20	58	8	78	2	86	2	64	2	71	4	
Lesser Yellowlegs	58	37	77	25	88	18	87	4	90	12	80	3	92	7	
Solitary Sandpiper	79	8	100	8	100	10	96	9	100	19	100	11	100	20	E
Spotted Sandpiper	63	8	100	12	100	14	100	12	100	9	100	8	100	14	L
Least Sandpiper	42	55	77	60	88	18	65	14	76	6	68	2	83	4	L
Pectoral Sandpiper	58	18	92	128	54	7	61	3	67	4	40	2	50	2	
Black-billed Cuckoo	11	1	54	2	29	2	43	1	29	2	48	2	38	3	
Yellow-billed Cuckoo	47	5	77	2	100	6	100	13	95	5	92	4	67	2	L
Commom Nighthawk	37	6	69	21	100	6	96	4	81	9	88	4	83	6	L
Chuck-will's-widow	37	5	8	12	96	6	83	2	90	8	100	8	71	1	
Whip-poor-will *	21	2	8	10	100	22	100	10	86	4	88	2	96	6	
Chimney Swift	100	34	100	46	100	145	100	229	100	182	100	195	100	190	
Ruby-throated Hummingbird	100	34	92	28	100	5	100	12	100	10	100	3	92	5	
Red-headed Woodpecker	95	39	92	30	92	11	100	5	95	8	88	3	79	2	
Eastern Wood-Pewee	100	31	92	35	100	23	100	18	100	18	88	3	83	4	L
Acadian Flycatcher	89	29	77	25	100	16	96	10	86	8	56	2	75	3	L
Least Flycatcher	21	3	46	5	17	2	43	2	14	2	8	1	71	11	
Eastern Phoebe *	63	5	100	6	100	18	100	16	100	11	100	13	100	30	
Great Crested Flycatcher	100	40	100	46	100	22	100	20	100	25	100	12	92	7	L
Eastern Kingbird	100	22	100	28	100	38	100	32	100	26	100	17	100	16	L
Purple Martin *	84	29	92	49	96	47	100	45	100	183	100	85	100	47	
Tree Swallow *	63	21	100	100	96	20	78	11	76	17	96	6	92	14	
N. Rough-winged Swallow	84	16	92	21	100	56	100	22	100	46	100	40	100	66	
Bank Swallow	16	14	77	24	75	12	65	3	48	6	76	4	50	4	
Cliff Swallow	21	6	38	1	25	4	96	40	100	165	68	3	50	6	
Barn Swallow *	95	92	100	104	100	165	100	139	100	106	100	122	100	150	L
House Wren *	16	5	23	2	25	2	78	4	29	2	96	5	96	16	L

	Memphis		Reelfoot		Columbia		Nashville		Chattanooga		Knoxville		Elizabethton		Early/
	F	N	F	N	F	N	F	N	F	N	F	N	F	N	Late
Blue-gray Gnatcatcher	100	181	100	107	100	90	100	59	100	56	100	47	100	24	E
Veery	68	7	62	7	96	8	83	3	67	4	76	2	67	4	L
Gray-cheeked Thrush	89	14	77	6	62	3	78	4	48	2	68	1	17	2	L
Swainson's Thrush *	100	89	92	12	96	16	100	22	76	6	100	7	42	2	L
Wood Thrush *	100	90	100	23	100	34	100	34	100	57	100	57	100	72	L
White-eyed Vireo	100	121	100	50	100	50	100	59	100	32	100	36	100	26	
Solitary Vireo *	32	3	38	2	29	2	74	1	38	2	88	3	100	14	
Yellow-throated Vireo	100	21	92	14	100	10	100	8	90	19	100	8	92	5	
Warbling Vireo	89	7	100	24	83	3	96	6	33	2	56	1	79	3	
Red-eyed Vireo	100	96	100	44	100	45	100	54	100	83	100	75	100	46	
Blue-winged Warbler	58	6	38	3	100	29	100	19	81	8	100	4	54	2	E
Golded-winged Warbler	32	4	46	4	62	3	87	1	48	4	92	3	67	4	
Tennessee Warbler *	100	150	92	70	100	56	100	37	90	15	100	16	38	3	L
Nashville Warbler *	74	11	54	5	96	10	96	6	57	2	100	7	29	1	
N. Parula Warbler *	100	83	92	47	100	12	100	7	62	3	88	4	100	16	
Yellow Warbler	58	5	100	9	100	36	100	23	100	21	100	23	100	50	
Chestnut-sided Warbler	68	10	62	10	92	6	83	4	81	8	100	6	100	20	L
Magnolia Warbler	21	9	62	15	54	3	91	3	81	4	68	2	25	2	L
Cape May Warbler	5	2	54	7	54	4	52	4	95	17	96	4	71	3	L
Black-thr. Blue Warbler	0	-	0	-	8	2	26	1	24	2	80	2	96	13	
Yellow-rumped Warbler	89	35	100	30	100	56	100	63	100	106	100	131	100	36	E
Black-thr. Green Warbler *	89	9	85	8	92	8	91	5	81	8	100	18	100	17	
Blackburnian Warbler *	42	6	62	5	67	5	83	2	81	6	96	5	71	2	
Yellow-throated Warbler *	100	6	92	10	100	10	100	9	90	13	88	2	71	5	
Prairie Warbler	21	4	38	3	100	30	100	27	100	10	100	25	100	6	
Palm Warbler	53	8	92	12	100	38	100	23	100	36	100	9	58	5	
Bay-breasted Warbler *	42	6	54	7	58	2	78	4	62	9	80	2	29	1	L
Blackpoll Warbler *	68	7	85	79	100	12	100	13	100	20	88	6	62	1	L
Cerulean Warbler	100	65	92	16	100	28	100	9	57	11	100	10	47	2	
Black-and-White Warbler	89	7	77	6	100	16	100	10	100	18	100	19	100	39	

	Memphis		Reelfoot		Columbia		Nashville		Chattanooga		Knoxville		Elizabethton		Early/
	F	N	F	N	F	N	F	N	F	N	F	N	F	N	Late
American Redstart	100	42	77	22	100	12	100	7	86	28	92	4	96	6	
Prothonatary Warbler	100	95	100	66	100	20	100	23	90	6	100	2	21	1	
Worm-eating Warbler *	47	6	38	2	100	11	96	7	86	4	100	8	100	7	
Swainson's Warbler	95	9	69	3	8	2	0	.	14	1	8	1	29	1	
Ovenbird	84	10	62	8	100	16	91	4	100	8	100	15	100	52	L
Northern Waterthrush	63	5	69	8	96	7	91	4	76	2	60	2	67	2	L
Louisiana Waterthrush *	89	15	62	4	100	18	100	14	100	10	96	3	100	10	
Kentucky Warbler	100	80	92	26	100	34	100	24	100	17	100	10	92	4	
Common Yellowthroat *	100	50	100	87	100	58	100	71	100	37	100	54	100	34	L
Hooded Warbler	100	24	69	5	100	14	96	6	100	14	100	16	100	30	
Wilson's Warbler	0	.	38	4	4	1	52	1	5	1	64	1	8	1	
Canada Warbler	16	2	15	2	25	2	65	1	81	2	80	2	58	6	L
Yellow-breasted Chat *	100	26	92	25	100	34	100	40	100	30	100	16	92	18	
Summer Tanager *	100	96	100	29	100	28	100	40	100	30	100	17	83	2	
Scarlet Tanager	100	17	85	9	100	26	100	18	100	27	100	18	100	24	
Rose-breasted Grosbeak	100	23	92	29	100	34	100	37	100	34	100	25	96	16	L
Blue Grosbeak	63	7	38	8	88	5	83	8	95	12	96	4	58	2	
Indigo Bunting	100	222	100	218	100	123	100	135	100	89	100	55	96	24	L
Dickcissel	68	27	100	160	88	14	65	3	24	2	24	4	4	4	
Bobolink	53	20	92	121	71	76	61	14	81	44	88	8	54	7	L
Orchard Oriole *	100	57	100	43	100	46	100	61	100	21	100	16	100	12	
Northern Oriole	100	54	100	60	83	8	100	12	86	10	92	4	96	9	

The relative abundance of each species in different areas of the state can be inferred from Table 1. Thirty-two species appeared in my judgement to be more frequent and abundant in West Tennessee, 8 in Middle Tennessee and 18 in East Tennessee. The remaining 24 species appeared to be more uniformly present.

Nine of the migrant species listed in Table 1 nest in the higher elevations of the Appalachian Mountains in East Tennessee. Six of these are more frequent and in higher abundance in the East Tennessee spring counts, especially in Elizabethton; they are Solitary Vireo, Black-throated Blue Warbler, Black-throated Green Warbler, Chestnut-sided Warbler, Ovenbird, and Canada Warbler, Two, Blackburnian Warbler and Rose-breasted Grosbeak, are equally common across the state. Only one, Veery, is relatively more common in West and Middle Tennessee than it is in the eastern area.

The data made it possible to determine which species were "early" migrants and which were "late", not on the basis of earliest and latest dates as is usually done, but on the basis of abundance. The average date of all counts was April 29. The period April 18-26 was defined as the early period, and May 2-13 as the late period. There were 33 counts in each of these periods. For a species which is neither an early nor a late migrant the number of counts above the median for that species would be expected to equal the number below the median in each of the two periods. On the other hand, an early migrant would be expected to have in the early period more counts above the median and fewer below, and vice versa in the later period. The relation is reversed for a late migrant. A chi-square test was used to test the data for each species. There were 51 species in which there was no significant difference from equality of the counts. Four species were significantly "early" and 27 were "late", at the 2% level of significance (23 of these 31 species actually had probabilities of less than 0.5%). The species designated early or late migrants are indicated in the last column of Table 1.

CHANGES IN ABUNDANCE

As described above, the observed number of individuals of each species was adjusted to the number per 5000 total observed birds. The adjusted numbers, therefore, are relative to the whole bird population. Whether or not this latter number has changed cannot be decided by data from the spring counts, so any observed change in a species must be interpreted as a change relative to all birds in the area at the time of the counts.

For detecting significant trends in the relative abundance of a species I used first the same method as described in the analysis of Christmas Bird Counts (Tanner 1985); this is a combination of testing for trends by the number of runs above or below the median (Conover 1971) and looking for parallel changes in abundance at two or more localities. This method is objective in that it does not depend on any arbitrary division of the time span into two or more periods. About 30 species had significant trends in two different patterns. The larger group showed an increase in abundance occurring about 1970, and a smaller group had a decrease beginning about 1978.

For each species of the first group a further test was performed by comparing the number of times that the adjusted number was above or

below the locality median in each of two periods, 1961-70 and 1976-85. If the abundance had not changed, the numbers above and below the median in each period are expected to be equal. A chi-square test was used to test for significant differences from the expected. A species was considered to show an increase about 1970 if it had a significant trend as shown by the runs test plus a chi-square with probability less than 2.5%, or if it had a non-significant runs test but a chi-square with probability less than 1%.

For the smaller group a similar chi-square test was performed using the periods 1961-77 and 1978-85, with the same criteria for recognizing a change.

Seventeen species increased in abundance beginning about 1970. They are the Green-backed Heron, Purple Martin, Tree and Barn Swallows, House Wren, Swainson's Thrush, Solitary Vireo, and the following warblers: Tennessee, Nashville, Parula, Black-throated Green, Blackburnian, Yellow-throated, Bay-breasted, Blackpoll, Worm-eating, and Common Yellowthroat. These species do not occupy the same nesting range; about a quarter nest primarily south of the Great Lakes, a quarter from Tennessee north into Canada, and half primarily north of the Great Lakes. Nor do they have similar winter ranges; about 40% migrate into South America and 60% no farther than Central America (nesting and winter ranges were determined from the maps in Peterson (1980) and descriptions in the American Ornithologists' Union check-list (1957)). Whatever caused the increase must have operated over a wide geographic range.

The year 1970 was near the end of the time when the insecticide DDT was being phased out of use in the United States and Canada (U.S. Environmental Protection Agency 1975). The last year that DDT was used extensively in forest insect contol was 1966 (excepting an intensive use around 1974 in Douglas-fir forests, which would be outside the range of Tennessee migrants). By 1970 the use of DDT had been banned in several states and on U.S. Department of Interior lands. In 1973 the domestic use of DDT had fallen to about 2% of what it had been in 1966, and the U.S. Court of Appeals upheld the decision of the Environmental Protection Agency to cancel all remaining uses of DDT on crops in the United States.

The harmful effect of DDT and other chlorinated hydrocarbon insecticides on the reproduction of larger predatory and fish-eating birds is well known (Hickey and Anderson 1968). Less is known about damage to insectivorous songbirds, but it did occur. Alsop (1972) cites examples of observed harm to Eastern Phoebes, Tree Swallows, American Robins, and two species of European thrushes, and his research proved a connection between DDT use and the thinning of eggshells of Red-winged Blackbirds.

Of the seventeen species showing an increase, the Green-backed Heron is a fish-eating bird and the others are insectivorous. The decline in the use of DDT is a plausible explanation for their increase. After discovering this increase, I performed the chi-square test described above on the commoner fish-eating and insectivorous birds reported in the Christmas Bird Counts in Tennessee (Tanner 1985), comparing abundance in the two periods in 1960-71 and 1976-85. The fish-eating Pied-billed Grebe and Great Blue Heron were both more abundant in the later period (chi-square probability less than 0.1%). Of the insectivorous species, the following increased (with chi-square probability equal to or less than 0.1%): White-breasted and Red-breasted Nuthatches, Carolina Wren, Golden-crowned and Ruby-crowned

Kinglets, and Yellow-rumped Warbler. There were no apparent changes in the numbers of phoebe, Carolina Chickadee, Tufted Titmouse, Winter Wren, and Eastern Bluebird, The results support the conclusion that at least 25 species of birds wintering in or migrating through Tennessee have increased after DDT was banned.

Most birds which migrate through Tennessee are insectivorous, which raises the question: why do not more species show an increase? A possible answer to this is that the numbers reported on spring bird counts are affected by the date on which the count was performed, errors in counting, and variations in habitat coverage, as well as by the true abundance of each species which responds to several kinds of environmental changes. Because of several causes of variation, significant changes due to one cause are hard to detect.

Seven species of migrants showed a significant decrease beginning about 1978. These all nest in the deciduous forest region primarily south of the Great Lakes and have overlapping winter ranges. The seven with their winter ranges are: phoebe—Gulf States and Mexico; Whip-poor-will - Gulf States through Mexico to Central America; Wood Thrush and Yellow-breasted Chat - Mexico and Central America; Louisiana Waterthrush, Summer Tanager, and Orchard Oriole - Mexico through Central America to northwestern South America. All of their winter ranges include Mexico and all but one include Central America. Thirteen species of Tennessee migrants winter entirely on the South American continent; none of these showed a decrease in recent years, and two - Purple Martin and Blackpoll Warbler - are in the group that increased after 1970.

The changes in the relative numbers of Summer and Scarlet Tanagers are interesting. Both species have similar habits and nest in mature deciduous forests. Summer Tanagers nest in all parts of Tennessee except the mountains, and Scarlet Tanagers nest in the Appalachian and Cumberland Mountains and in scattered locations in the rest of the state. In the spring bird counts at Memphis and Reelfoot, Summer Tanagers have always predominated. At Columbia and Nashville, Summer Tanagers were more numerous until 1978, after which Scarlet Tanagers were usually more abundant in the counts. At Chattanooga and Knoxville, Scarlet Tanagers became the predominant tanager after 1970. At Elizabethton, Scarlet Tanagers were always more common. At all localities the ratio of Summer to Scarlet Tanagers showed a marked decrease around 1977. Summer Tanagers winter from Mexico to South America, while Scarlet Tanagers winter in northwestern South America.

The relations between winter ranges and trends in abundance of 74 species of Tennessee migrants can be seen in Table 2. Species listed in Table 1 that are omitted from this table are American Kestrel, Red-headed Woodpecker, and six species of shorebirds. Winter ranges are classified into two groups. The first includes species that winter predominantly or partly in Mexico, and the second is composed of species wintering from Central America southward, entirely in South America, or in the West Indies. The table shows that the 50 species which had no significant changes in abundance and the 17 species which increased about 1970 are divided into the two groups in about the same proportions as all species, but those with decreasing abundance are all in the group whose winter range includes Mexico. The numbers are too small for any statistical tests of significance They only suggest that the decreases are related to winter ranges in Mexico.

Table 2. Winter ranges of Tennessee migrants classified by trends in abundance.

Winter Range	Number of Species			
	No significant trend	Increasing about 1970	Decreasing about 1978	Total
Includes Mexico	29	12	7	48
Outside of Mexico	21	5	0	26
Totals	50	17	7	74

Several authors (Wilcove 1985) have suggested that in recent years there has been a decline in the abundance of songbirds in the United States due to one or more reasons including the loss of winter habitat from clearing of forests in Central and South America, the fragmentation of woodlands in the United States leading to the extinction of local populations of forest birds, and increased predation resulting from habitat changes favoring predators. This analysis of the numbers of migrants seen in Tennessee does not support these ideas. More species have increased than decreased, with the likely cause for this being the near elimination of the insecticide DDT. If loss of winter habitat is the cause of the decrease of seven species, the habitat changes must have occurred in Mexico or in Mexico and Central America rather than in South America.

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ROUND TABLE NOTES

BROWN-HEADED COWBIRDS FEEDING YOUNG IN COFFEE COUNTY, TENNESSEE——In our backyard in Tullahoma, my husband Frank Hernandez and I had several Brown-headed Cowbirds (*Molothrus ater*) come to our bird feeders during the winter of 1984-85. They continued to frequent the feeders where sunflower seed was offered in the spring and early summer of 1985. One pair of cowbirds stayed around the yard most of every day, especially in early April when a pair of Eastern Bluebirds (*Sialia sialis*) was building a nest in a nest box. We did not see any cowbirds again until 1 May, and then saw them daily from 11 May to 20 May. On 20 May I heard many raucous bird noises in the backyard. I went out and observed a female Northern Cardinal (*Cardinalis cardinalis*) feeding a young cowbird. There were a male and female cowbird also feeding the young cowbird between feedings by the female cardinal. We saw no cowbirds the next day, and did not observe any until 4-5 June when we observed a pair of adult birds in the yard. We observed the 3 cowbirds together for the next three days.

It appears that these adult cowbirds did not just lay their eggs in another bird's nest and then abandon them, but remained in the area and cared for the young. Bent (*U.S. Nat. Mus. Bull* 211:441) records 3 cases of female cowbirds feeding young, and Merritt (*Migrant* 27:40, 1956) also notes this behavior. Having read an article by Kay McCracken "Do Cowbirds recruit their own young" (*Bird Watcher's Digest* 6(4):72-74, 1984), I was aware that the behavior we had observed is rarely noted.

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FIRST SIGHT RECORD OF RUFOUS HUMMINGBIRD IN TENNESSEE——On 6 September 1983 I observed an immature male Rufous Hummingbird (*Selasphorus rufus*) in west Murfreesboro, Rutherford County. The bird was seen by Anne L. Hettish and Ruth V. McMillan later the same day. More than 20 other observers viewed it 7-8 September 1983; several of them ——J. Paul Crawford, Michael L. Bierly, and Lee F. Kramer——obtained photographs.

This bird was often viewed in direct comparison with Ruby-throated Hummingbirds (*Archilochus colubris*). Its plumage was distinctly more rufous than that of any of the other hummingbirds with which it associated, especially on its undersides and back. No greenish coloration was evident on its upper back, separating it from the very similar Allen's Hummingbird (*Selasphorus sasin*), which occurs accidentally as far east as southern Louisiana (AOU Check-List of North American Birds, 6th ed., 1983). A color transparency of this bird taken by Crawford has been viewed by a number of individuals; it appears to confirm the identification of the bird. If accepted by the Certification Committee of the Tennessee Ornithological Society, this record would constitute the first one for this species in Tennessee.

Although no previous record of Rufous Hummingbird has occurred in the state, two *Selasphorus* sp. have been recorded. On 9 November 1976 a freshly dead female of this genus was discovered by Cal Newman at the Pink Palace Museum in Memphis. The specimen was eventually deposited

in the collection of the Louisiana State University Museum of Zoology (LSUMZ 87078), where it was examined by Allan Phillips, who identified it as a Rufous, and by Bruce Sorrie, who identified it as an Allen's. J.V. Remsen, besides offering the foregoing data about the process of attempting an identification of the bird, has recommended that it "should probably be left as a *Selasphorus* sp." (pers comm.). A second record of a *Selasphorus* hummingbird also occurred in Memphis 26-29 September 1983, only 18 days after the sighting in Murfreesboro. An immature male was observed by William C. and Joyce North at Riverbluff Point in that city. Photographs of this bird were obtained by George R. Payne and Jo Levy. Remsen (pers. comm.) studied these and concluded, since the transparencies made by Payne suggested that the bird was an Allen's Hummingbird while a print by Levy suggested Rufous, that the identity of the bird "should remain as *Selaphorus* sp.".

LOU A. ERWIN, Rt. 2, Box 187, Murfreesboro, TN 37130. Accepted 8 November 1986.

RUFOUS HUMMINGBIRD IN CARTER COUNTY, TENNESSEE—— On 27 September, 11 and 12 October 1985, I observed a male Rufous Hummingbird (*Selasphorus rufus*) at my house, then located between Johnson City and Elizabethton in Carter County, Tennessee. I had excellent views of this bird on all 3 occasions. On 27 September about noon I spotted the bird as it sat on a telephone line over a blooming bed of scarlet sage (*Salvia carabiniere*) in my yard — a bed which Ruby-throated Hummingbirds (*Archilochus colubris*) frequented. I saw it at a distance of approximately 4 m for a period of roughly 1½ minutes. The sky was overcast.

On 11 and 12 October I observed the bird repeatedly as it fed among the scarlet sage and sat on the same telephone line. This time I observed the bird at a distance of about 3 m. The time of day was late afternoon on 11 October and early morning on 12 October. On both days the sky was clear.

On all 3 occasions I watched the bird with my naked eye and through Bushnell ensign 7x50 binoculars. The bird was readily identifiable as a Rufous by its reddish-brown back, sides, and tail. It lacked the Ruby-throated Hummingbird's distinguishing characteristics, the iridescent green crown and back, the olive sides and the largely black tail. The bird's red gorget marked it as a male.

Most Rufous Hummingbird records in the East have come from Florida; however, some records come from as far north as Nova Scotia (*American Birds,* Vol. 40, No. 1, 1986). In Tennessee, Lou A. Erwin, *et al.* recorded one immature Rufous seen in Murfreesboro on 6-8 September 1983 (*Migrant* 55:21, 1984). In addition, there have been 2 records of *Selasphorus* sp. Memphis (Erwin, *Migrant* 57:98-99, 1986).

RICHARD CLARK, Route 7, Box 297A, Lenoir City, TN 37771. Accepted 15 August 1986.

UNUSUAL SMALL GULL SEEN IN ROANE COUNTY, TENNESSEE——On 22 May 1980 Daniel R. Jacobson, Kathy Davidson, and Lillian H. Dubke visited the Kingston Steam Plant near Kingston, Roane County. While counting birds there, they observed a small gull which they identified as a Sabine's Gull (*Xema sabina*). Because moderate to heavy rain was falling that day, no other observers notified about this gull went to look for it except Barbara H. Stedman and myself; we arrived at the

site in late evening and obtained unsatisfactory views of the bird due to the rain which continued to fall. Had we not seen the bird again, we would have agreed that it was a Sabine's Gull.

On 23 May 1980 several observers visited the steam plant and obtained lengthy views of the gull. These observers were J.B. Owen, Paul Pardue, and J. Paul and Dot T. Crawford. Weather conditions were much better that day, and all observers viewed the gull, agreeing that it was a Sabine's Gull. Most of them cited the deeply forked tail of this larid as its key identifying mark, although other field marks were also cited in support of this identification.

Later on the 23rd Barbara and I revisited the steam plant and were once again able to view the gull. Our observations of it convinced us that we were seeing a Little Gull (*Larus minutus*). In particular we were impressed by the immature kittiwake-like wing pattern which the bird displayed and by the strong contrast between the color of the hindneck and that of the mantle of the bird.

Since that time the identity of this gull has been a subject of some debate and has never been resolved; no mention of it occurred in "The Official List of Tennessee Birds" (Nicholson, *Migrant,* 54:2-5, 1983). Currently, only one mention of the sighting has occurred (Hall, "Appalachian Region," *American Birds,* 34:775-778, 1980); Hall merely noted that "opinions were divided as to whether it was a Sabine's Gull" (p.776). It is not the purpose of this note to attempt a resolution of the identity of this bird, which may not be possible in any event. Rather, I would simply like to put on record the facts of the sighting and to alert Tennessee field workers that either Sabine's Gull or Little Gull is a species which might have occurred in the state in 1980 as a first state record. Either species could be expected to recur.

STEPHEN J. STEDMAN, Rt. 6, Pinewood Rd., Franklin, TN 37064. Accepted 10 November 1986.

BOOK REVIEW

HUMMINGBIRDS, THEIR LIFE AND BEHAVIOR - by Esther Q. Tyrrell and Robert A. Tyrrell. 1985. Crown Publishers, New York. 212 pp., drawings, 253 color photos. $35.

This book begins with a brief introduction, followed by "A portfolio of North American hummingbirds." This chapter includes a section on each of the 16 species which have bred in the United States, and describes field marks, breeding and wintering range, migratory habits, nesting season and habitat. Except for field marks, the amount of detail here varies somewhat from species to species, and there are a few errors. For some species described as non-migratory in the 1983 AOU Check-list, information on either the breeding range, winter range, or both is said to be unavailable. The breeding range of the Violet-crowned Hummingbird (*Amazilia violiceps*) is described as "Southeastern Arizona and Southwestern New Mexico," omitting the large part of Mexico in which the species also breeds. These descriptions are accompanied by frontal and rear or side photographs of the male and a drawing of the female of each species. The drawings of the females are of limited use for identification. Other chapters include "Anatomy," which has sections on the main bodily systems illustrated by paintings or drawings of dissections and photographs, "Feathers," "Flight," "Courtship and Nesting," "Food and Metabolism," "Behavior," and "Wildflower Pollination." Each of these chapters is illustrated with photographs. The last chapter includes a section on hummingbird flower mites (but no photos of mites), and a list of hummingbird-pollinated wildflowers. An appendix lists all the hummingbirds of the world, and the bibliography cites about 150 works published through 1983. The various topics are discussed in detail in the text, and it is obvious that much use was made of the references in the bibliography. No citations are given in the text. This makes the book easier to read, but hinders its use as a starting point in hummingbird research. The text also contains several misspellings or typos, such as "Great Smokey (sic) Mountains" in the preface.

The text, however, is secondary to the photographs, which are the *raison d'etre* for the book. Indeed, the subtitle of the book is 'A photographic study of the North American species.' The 235 color photos are stunning, and illustrate most aspects of hummingbird life. Numerous photos of feeding birds are included, as well as shots of courtship and aggresive behavior, nesting, development and care of young, molting, preening, sleep and torpor, and stretching. The photos range up to full page in size, and in my copy of the book, are reproduced very well. Except for acknowledgements of custom high-speed strobe equipment, little information is given on how the photos were taken. Photo series showing molt sequences were probably made in an aviary, and some birds appear to have bent primary tips. This does not, however, detract from the presentation.

It would not be fair to conclude this review without a comparison with Johnsgard's 1983 'Hummingbirds of North America.' Johnsgard's book, with a comprehensive text, literature citations, and paintings of hummingbirds, should appeal more to those interested in an introduction to hummingbird research. The Tyrell's book, with its beautiful photographs, will appeal to a much wider audience. And, at $35 for a large format book full of color photographs, it is affordable by a large audience. — CHARLES P. NICHOLSON.

THE SEASON

SUMMER: 1 JUNE — 31 JULY 1986

Although most of the state received some much-needed rainfall during June and July, the amount remained below normal as the drought continued. In parts of the state, drought effects were intensified by unusually high July temperatures. Based on the regional compiler's comments, there were apparently few drought-related impacts on nesting birds. I did notice several American Robin nests near my home in Norris which were constructed without any mud, and then abandoned. While watering my garden with a sprinkler, I often had a frenzy of robin mud-gathering. See Steve Stedman's comments below on the Bewick's Wren for more possible drought effects.

This was the first year of the Tennessee Breeding Bird Atlas project, and some significant breeding records were mentioned in the spring report. Atlas fieldwork continued through the summer, although record July temperatures caused some of us to seek temporary refuge near our air conditioners. Nevertheless, there were many more birders afield this summer, and the reports that follow here are longer as a result. Interesting reports included Anhingas and young Blue-winged Teal in west Tennessee, several reports of Cooper's Hawks from across the state, a Common Moorhen pair near Columbia, new sites for Willow Flycatchers, new nesting locations for Tree and Cliff Swallows, a fledgling Black-throated Blue Warbler in the Cumberland Mountains, and Red Crossbills feeding young on Roan Mountain. Read on for more.—CHARLES P. NICHOLSON.

WESTERN COASTAL PLAIN REGION — The summer was hot and dry. Nesting was again recorded for Black-necked Stilts and House Finches in the Memphis area. No Bachman's or Grasshopper Sparrows were found at areas previously used by these species. High water on the Mississippi River limited the number of available nest sites for Least Terns. Early records were established for several fall migrants.

Grebe-Egret: Pied-billed Grebe: 1-30 June (21 imm), the 4-16 July (2-8 imm) TAT (WGC); marsh ditched and planted in August. Anhinga: 23 Jun (1) REL (JRW); possible nesting in Anderson-Tully WMA, LDC (PBH, RPF). Least Bittern: 4 Jun (1) TAT (WGC); 5 Jul (1) TIG (JCR). Great Blue Heron: May-Jul (50-plus active nests) Camden area of Kentucky Lake WMA (Mark Goodlin, *fide* RMH); 4 Jul (95) LKC (JCR); 30 Jun, 4 Jul (25) TAT (WGC); 30 Jul (35) I13 (WGC). Great Egret: 4 Jul (86) LKC (JCR); 19 Jul (18) TAT

(WGC). Snowy Egret: 14 Jul (14) levee 2 mi S of I13 (WGC). Little Blue Heron: 4 Jul (75) TAT (WGC); 4 Jul (13) Miss. R., LKC (JCR); 5 Jul (23) TIG (JCR). Yellow-crowned Night-Heron; colony of 6 pairs at MEM (BBC); 30 Jun (14 ad, 10 imm) TAT (WGC). Cattle Egret: 4 Jul (90) LKC/DYC (JCR).

Teal—Falcon: Blue-winged Teal: 1 Jun-24 Jul (4 males, 1 female) TAT: (WGC); 1 Jun (1 ad, 4 y) ESL (BBC, LCC). Northern Shoveler: 1 Jun (1 male), 24 Jul (2 males) TAT (WGC). Green-winged Teal: 3 Jun (pair) TAT (WGC). Hooded Merganser: 1 Jun (7 females), 3 Jun (imm) TAT (WGC). Mississippi Kite: 3 Jun (10) Hwy 78, mile 5, LDC (Linda Waters, USFWS); 10 Jun (60) ESL (JLL, DWM), new area high count; 4 Jul (31) ESL (JRW); 4 Jul (8) LKC/DYC, 5 Jul (5) TIG (JCR); 26 Jul (16) ESL (JRW). Bald Eagle: see Highland Rim and Basin Region report. Cooper's Hawk: 7 Jul (3 y) HEC (Charlie Norvell, TN Parks). Red-shouldered Hawk: 4 Jun (1) TAT (WGC). Broad-winged Hawk: 10 Jun (1) Chucalissa, SBC (CHB, Selma L. Lewis, Noreen M. Smith, MGW); 17 Jun (1) MEM (JRW); 27 Jun (5) ESL (JRW, MGW). American Kestrel: 12-25 Jun (5 banded) MEM (MGW); 13 Jun (1) NW HEC (CHB); 5 Jul (5) DYC (JCR); 20, 26 Jul (2) ESL (DPB, DAD, JRW, MGW); more reports than in previous years. Peregrine Falcon: 20 Jul (1) ESL (JRW).

Plover—Tern: Semipalmated Plover: 28 Jul (6) I13 (WGC). Piping Plover: 26 Jul (2) I13 (MHI, CKC); 28 Jul (1) TN 79 at Great River Rd., LKC (WGC). Killdeer: high of 318 on 27 Jul at ESL (JRW, MGW). Black-necked Stilt: up to 9 adults present and 4 possible nests, only 2 of which hatched young at ESL (JRW, DPB, DHB, DAD, MGW). Greater Yellowlegs: first present 13 Jul, 20 Jul (24) ESL (DPB, DAD, JRW, MGW). Lesser Yellowlegs: 4 Jul (3) LKC (JCR); 13 Jul (34), 20 Jul (24) ESL (DPB, DAD, JRW, MGW). Solitary Sandpiper: 6 Jul (7) ESL (JRW), new early record by 7 days; 13 Jul (6) TAT (WGC); 20 Jul (24), 26 Jul (19) ESL (JRW, DPB, DAD, MGW). Spotted Sandpiper: 1 Jun (1) ESL (JRW); 1 Jul — EOP, max of 14 on 20 Jul, at ESL (JRW, MGW, DPB, DAD *et al.*); 16 Jul(2) TAT (WGC). Western Sandpiper: 29 Jun (1) ESL (RTC), first SBC June record; 20-27 Jul (4-13) ESL (DPB, DAD, JRW, MGW); 24 Jul (1) TAT (WGC); 28 Jul (3) TN 103 at levee, DYC, (14) TN 79 at levee, LKC (WGC). Least Sandpiper: low of 2 on 4 Jul to high of 212 on 26 Jul at ESL (JRW); 4 Jul (18) LKC (JCR). White-rumped Sandpiper: 20 Jul (8) ESL (JRW, DPB, DAD, MGW), early record by 3 days. Baird's Sandpiper: 26 Jul (2) PHI (MHI, CKC). Pectoral Sandpiper: first 13 Jul (15), to EOP, max 560 on 26 Jul at ESL (JRW, DPB, DAD, MGW); 20 Jul (16) TAT (WGC). Stilt Sandpiper: 20 Jul (4), 26 Jul (6) ESL (DPB, DAD, JRW, MGW); 28 Jul (6) TN 103 at levee, DYC, (3) TN 79 at levee, LKC (WGC). Short-billed Dowitcher: 4 Jul (5) LKC (JCR); 13-20 Jul (2-7) ESL (JRW, DPB, DAD, MGW); 13 Jul (1) TAT (WGC). Least Tern: 4 Jun-26 Jul (2-12) Miss. R., SBC (MHI, JCR, JEW, JRW, MGW, DAD); 15 Jun (2) Island 36, Tipton Co. (RPF); 19 Jun (6) Golddust, LDC (RPF); 14-30 Jul (27-50 +) I13 (WGC, JCR).

Wood-Pewee—Finch: Eastern Wood-Pewee: 23 Jun (pair feeding y in nest) MEM (JRW). Tree Swallow: 3 Jun (2) Tenn. R. near Eva, Benton Co.; 22 Jun (1) Britton Ford, HNC (JCR); 4 Jul (65) PHI (JCR). Cliff Swallow: 3 Jun (50) Stewman Cr., DTC, (25) Doe Cr., HDC, (40) Owl Cr. at TN 142, HDC, a

few at US 70 bridge, BNC/HNC (BBC, LCC); 29 Jun (1) ESL (RTC). Northern Rough-winged Swallow: 4 Jul (150 +) LKC (JCR). Bank Swallow: 4 Jul (1) PHI (JCR). Fish Crow: 4 Jul (2) TIG (JCR). Brown Creeper: 12 Jun (1) Forked Deer R., Madison Co.; 17 Jun (2) near Rossville, FYC; 20 Jun (2) REL, LKC; 23 Jun (1) Como, HNC; 5 Jul (2) Shelby Forest State Park, SBC, all by RPF; details to be published as Round Table Note. Loggerhead Shrike: reported from HEC, LKC, and SBC at ESL (BBC, LCC, DAD, MGW, RCS, DOS, JRW, CHB). Warbling Vireo: reported from SBC, HNC, BNC, LKC, OBC, Haywood Co. (BBC, LCC, RPF, RCS). Ovenbird: 8-29 Jun (1-4) NE DTC (CHB). Scarlet Tanager: 2 Jun (1) E of Samburg, OBC (Rob Peeples); 4 Jun (pair) Cub Creek, HDC, (HBD, CHB). Painted Bunting: 14 Jun-1 Jul (1-3) President's Island, SBC (CHB, JLL, DWM, DOS, JRW, MGW); 29 Jun (1) ESL (JEW, MGW). Bachman's Sparrow: 22 Jun (1), 24 Jun (2) Big Sandy Unit, Tenn. Nat. Wildl. Refuge, HNC (JCR, DPB, DAD, Virginia Reynolds, MGW); not found at previously used locations checked in late May and June (BBC, LLC, CHB). Lark Sparrow: 2 Jun (possibly 2 pairs) near Parker Crossroads, HEC (BBC, LCC). Grasshopper Sparrow: 5 Jul (5) 1 mi S of Roellen, DYC (JCR). House Finch: nesting in area for 5th season, MEM (William R. Miller, BBC).

Locations: BNC - Benton Co.; DTC - Decatur Co.; DYC - Dyer Co.; ESL -Ensley Sewage Lagoons, Shelby Co.; HDC, - Hardin Co.; HEC - Henderson Co.; HNC - Henry Co.; I13 - Island 13, Lake Co.; LDC - Lauderdale Co.; LKC -Lake Co.; MEM - Memphis; OBC - Obion Co.; PHI - Philippy, Lake Co.; REL -Reelfoot Lake; SBC - Shelby Co.; TAT - Tatumville Marsh, Dyer Co.; TIG -Tigrett WMA, Dyer Co.

MARTHA G. WALDRON, 1626 Yorkshire Dr., Memphis, TN 38119.

HIGHLAND RIM AND BASIN REGION——The season was exciting; read on.

Needless to say, dry conditions continued. Nashville rainfall in June was 2.38 inches (1.20 in. deficient) while July was drier still with 0.77 inches falling (3.05 in. deficient). The yearly shortfall in the city for the first 7 months of 1986 almost equalled the shortfall for all of 1985; however, to the west in Waverly, HPC, nearly normal rainfall accumulation for the year occurred during the same period. Throughout the region it was hotter than normal; the 102°F on 20 July set an alltime record for that date in Nashville, and it was hotter still in Gallatin——106°F. Overall, July averaged 3°F above normal.

One important gauge of bird species' status——the "Blue List" (*American Birds* 40: 227—235, 1986)——returned after a four-year publication hiatus. This list acts as an early-warning system for species declining in major parts or all of their ranges, and it has application to a number of species breeding in middle Tennessee, as the following report makes clear. Species denoted as "Blue-listed" are in most serious jeopardy, those listed as of "Special Concern" are in lesser jeopardy, and those characterized as of "Local Concern" are least seriously in decline, although all are judged to be jeopardized. Some Blue-listed species may eventually find a place on the list

of Endangered Species if their decline continues long and precipitously enough, as has recently happened to the Piping Plover.

Breeding Bird Surveys (BBS) provided data on 96 species breeding in the region this year, equalling the 1985 total. For the first time in 17 years, one of the region's BBS routes was not covered in 1986; thus, the lowest-ever totals which follow are slightly less significant than they would normally be, while the highest-ever totals are slightly more significant. Counted in lower numbers than in any of the preceding 20 years were Gray Catbird (28), White-eyed Vireo (80), Prairie Warbler (30), Hooded Warbler (1), Yellow-breasted Chat (164), and Eastern Meadowlark (532); the last two species continue to trend downward. Highest-ever totals were accumulated for Canada Goose (70), Downy Woodpecker (72), Eastern Kingbird (129), Cliff Swallow (20), American Robin (303), and Blue Grosbeak (88); all of these species except the woodpecker and kingbird show clear trends of increase over the past 20 years. Comments about BBS results for a number of other species may be found in the species accounts which follow; however, one of those species deserves more prominent discussion.

On the BBSs and in every other facet of its existence in the region, the Bewick's Wren remains an enigma. After its very poor showing on the 1985 BBSs and CBCs, even more dire results were expected from the 1986 breeding season. Instead, the species rebounded extremely well with 3 showing up on the BBSs. Overall, birds were observed at 17 sites in 9 counties, making the 1986 nesting season the best in this decade for the species, based on available data. Breeding Bird Atlas workers were certainly responsible for some of the increase in sightings, but not all of the increase can be attributed to atlas work. Since Bewick's Wren continues to do well in the western U.S., where many areas routinely experience drier conditions than are normal in Tennessee, perhaps the drought of 1986, following that of 1985, actually benefitted the species. If no researcher is currently studying the biology of this Blue-listed species in the state, then it is time that the professional and amateur ornithologists of Tennessee initiated a few projects.

Thanks go to all the observers cited below, as their documentation and submission of records are the vital first steps which lead to season reports. Thanks also go to John C. Robinson for review of a draft of this report.

Loon - Night-Heron; Common Loon: 31 Jul (1) WDR (Ruth Luckado), only report. Pied-billed Grebe: 28 Jun (2 in breeding plumage) BEC (MHI, ECC), only report. Double-crested Cormorant: 16 Jul (1 ad) DRU (SJS, MHI, CKC), only report; at a site known to have harbored a breeding population in 1940's. American Bittern: 28 Jul (1) RDL (ATT); 4th NA summer record. Great Blue Heron: 18 Apr (208 active nests) DRU heronry (EB), slightly up in numbers from 1985; no data on the CFC rookery available; widely reported in mid-July with max on 20 Jul (29) LWP (MHI, CKC) away from rookery. Great Egret: reported from HPC, SWC, SUC, WMC, and WLC with max 16 July (10) DRU (SJS, CKC, MHI). SNOWY EGRET: 26 Jul (1) LWP (JPC, DTC), 11th NA record. Little Blue Heron: reported only from CCNWR and LWP with max 31 Jul (63) CCNWR (JCR). Cattle Egret: 10 Jun (2 ad in breeding plumage) Shrader Lane, DVC (RJM); 29 Jun (1 ad) Leatherwood X Long Creek Rds., SWC (JCR); only reports. Black-crowned Night-Heron: 13 Apr (175-325 active nests) Bordeaux heronry, DVC (PBH *et al.*); all season

(up to 20, with nesting highly probable) island in OHL offshore from GSP (DTC, JPC); by EOP (up to 13) CCNWR (JCR), probably an influx from a heronry on Lake Barkley in Kentucky portion of LBL (*fide* Brainard L. Palmer-Ball, Jr., JCR); by EOP (up to 7) MOP (KGA, SJS, JCR), post-breeding influx from unknown rookery. Yellow-crowned Night-Heron: small numbers reported from Ruskin, DIC (1 ad), Shrader Lane, Morrow Rd., and MC, DVC (up to 6/4/4), Stones R., Murfreesboro (1), BEC (3), CCNWR (1), and Tullahoma, CFC (4).

Shelduck-Vulture: RUDDY SHELDUCK: 4, 11 Jul (1 unbanded ad female) GSP (JPC, DTC), steam plant personnel indicated bird had been present for 8-10 weeks previously; 2nd NA record, but bird almost as suspect in origin as first one (*Migrant* 55: 44, 1984). Wood Duck: 31 May (116) CCNWR (JCR), max. American Black Duck: 6 Jul (1) DRU (JCR); brooding ad (in Osprey nest) and, earlier, young birds reported (without details) (EB); 19 Jul (1 capable of strong flight) MOP (SJS, JCR), probable migrant. Lesser Scaup: 6 Jun (1 ad male) MOP (WNJ, CKC, DJS, SJS), only report. Black Vulture: early Apr (2 at site used for nesting in the 4 previous years) Suggs Creek, WLC (Eric Thibault); 25 May (1 ad taking off from nesting habitat-cliff face) near Burristown, OVC (PBH, DOS); 10 Jun (51) CCNWR (JCR), max; a species of Local Concern, but apparently not declining in middle Tennessee. Turkey Vulture: Mar-May (nest with 2 young) LWC (MDW), first nest reported in region in last 4 years (although this one was active during that time).

OSPREY: The number of pairs attempting to nest in the region increased from 1 to 3; however, no successful fledging was reported at any of the 3 sites where nesting occurred. The pair at DRU returned to the nest used in 1984 and 1985, laid eggs, incubated them for 3 weeks, and then abandoned the nest; they built another nest some distance from the first one but abandoned it also; they returned to the orginal nest only to find it in the possession of a brooding Black Duck, so they built another nest about 50 m away, but results of that nesting were not reported (*fide* EB). Another pair, including one bird hacked from the PPL hack site in the past (indicating that the hacking program works), built a nest on a transmission tower in PPL, but the nest blew down in an April storm; in July the birds started another nest at the hack site; perhaps after all this practice they will return and successfully fledge young next year, especially if TWRA bars disruptive activities from the nest site (*fide* RMH, MHI). A third pair built a nest on a transmission tower in OHL in June (Wick Comer, *fide* RMH) and were reported there in July (JDP); no evidence of eggs or young was ever detected at that site. Taken together, the latter two nesting efforts probably constitute the first NA nesting record, although perhaps that honor should be accorded the Ospreys which carried sticks at PPL or those which placed them on lighting towers at GSP last summer (*Migrant* 56:110, 1985). Indicative of the increasing numbers of this species in the region during summer was the occurrence of a pair at mile 181 near Cockrell Bend on the Cumberland R. on 5 Jul (JDP); no other evidence of the pair was reported, but Ospreys should be looked for in that area, and at many others along the Cumberland River, in the future.

BALD EAGLE: The number of breeding pairs in the region increased from 5 to at least 7 with 3 of the pairs fledging a total of at least 5 young. This year the Westvaco birds, which began the "great comeback" in 1983, initiated activities around the nest in Jan and laid 3 eggs in late Feb. These

hatched in late Mar, and three young fledged in early Jun, making this nest the most successful of all those active this year (*fide* JCR); indeed, the nesting biology of this pair in 1986 was a classic textbook case. The other CCNWR pair was active from Jan-Jun, but their deep nest prevented observers from seeing eggs or young; however, an unbanded and untagged immature eagle sighted at CCNWR on 25 Jul (Sarah McClellan) suggested to JCR that the pair was successful this year, though he is right in thinking that the record remains conjectural. Of the LBL pair little was reported except that they constructed a new nest after abandoning the one built in 1984 due to harassment from low-flying jet planes stationed at Fort Campbell (*fide* RMH). At DRU 2 pairs built nests, up from 1 in 1985; however, the rival birds stole one another's nesting material with such persistence that both nests were abandoned; each pair built a new nest, but only the pair nesting on the west side of the Tennessee R. was successful, fledging 1 young (*fide* EB, RMH). The Normandy L., CFC, birds were active around the nest in Jan but no other data were reported, though efforts to observe the birds were made (MDH). The most exciting news of all came on 19 Jul when a juvenile Bald Eagle was sighted in Jackson County on Cordell Hull L. On 27 Jul an adult Bald Eagle was seen transferring a carp to the juvenile, establishing the breeding of the species in this area convincingly; photographs were obtained of the juvenile (Kurt Eichenburger, JDP). This nesting record confirmed the earlier suspicions of these observers, who had reported an immature eagle on Cordell Hull in late summer of 1985 (*Migrant* 57: 26, 1986). The occurrence of an adult Bald Eagle on PPL 1 Jul (RVM) raised the prospect of still another pair breeding in the region in the future, while the hacking project at LBL continued to release potential breeding birds with 8 hacked this year (*fide* RMH).

Hawk-Kestrel: Sharp-shinned Hawk: 16 Jul (1 ad) mile 73 on I-65, WMC (DJS), only report of this Blue-listed species. Cooper's Hawk: 16 May (1 ad carrying prey) HIC (SJS); 24 May (1 ad) RUC (RVM); 25 May (1) SE JAC (LHD); 26 May (1 ad) S of Gainesboro, JAC (SJS, DJS); 1 Jun (1 ad) near St. Joseph, LWC (DJS); 4 Jun (1 ad) S of LOR (DJS); 15, 24 Jun (1 carrying prey each date) CCSP (JCR); 16 Jun (1 ad) mile 59 on I-65, WMC (DJS); 21 Jun (1 ad) LOR (Don K. Simbeck); 29 Jun (1) SWC (JCR); 4 Jul (1 ad, 1 im) South Harpeth Valley, WMC (ATT); 29 Jul (1) CCNWR (JCR); 29 Jul (1) LEF (BHS); an encouraging number of breeding season reports of this Blue-listed accipiter. Red-shouldered Hawk: Mar-May (10 active nests) SE LWC along Sugar Creek (MDW), the 16th year that MDW has monitored nests at this site; Mar-Jun (nest with young) Basin Spring, WMC (KAG); 3 Jun (1) Barnes Hollow, PUC (Richard W. Simmers, Jr.), few nesting reports of this Blue-listed buteo. Red-tailed Hawk: Jan-May (7/5 active nests) LWC/Giles Co. (MDW), also 16th year of coverage. American Kestrel: 19 Jun (1 ad feeding young at nest in side of Iroquois Apartments) SW DVC (PBH); observer's comment is a good one: "!"

Chukar-Tern; CHUKAR: 2 Jun (1) PWP (DFV), although a first for the NA, the bird undoubtedly was an escapee. KING RAIL: 6 Jun (1 calling) Goose Pond, GYC (Jerry L. Ingles), only report of this species of Special Concern. COMMON MOORHEN: 6-27 Jun (pair, one seen giving distraction display when a raccoon came near) MOP (KGA, *et al.*), first positive evidence of this species as a breeder at the site. PURPLE GALLINULE: 4 Jun (1) BEC (CKC, MHI), continues a Spring 86 record. Spotted Sandpiper: 11 Jun (1 ad) Center Hill L., Dekalb Co. (JWW); 15, 24 Jun (4/2 ad) CCSP

(JCR); no nesting evidence was secured. American Woodcock: 15 Jul (1) near pumping station at DRU (CPN), only report. Herring Gull: 4 Jun (1 3rd-year) LIB (DJS), late migrant. Caspian Tern: 11 Jun (2) CCNWR (JCR), also late migrants. Least Tern: 12 Jun (2 ad) CCNWR (JCR, DWB), a suggestive report; the birds probably were wanderers from a known breeding population near Smithland Dam in Kentucky, but were possibly from an unknown site in Tennessee (JCR).

Barn-Owl—Flycatcher: Common Barn-Owl: 4 Jun (used nest with fairly fresh prey still present, but no young or ad), LIB (DJS); Jun-Jul (up to 4) Buffalo Rd., SW DVC (Debbie W. Hill), nesting suspected; an unsubstantiated report from Lebanon, WLC (at the now defunct Castle Heights Military Academy) was received. Eastern Screech-Owl: 24 Jul (9) along one-half km stretch of Harpeth R. in EWP (MHI, CKC), max; although counts such as this one are simple to make, none has been submitted for past 3 years; since this species and the previous one have been listed as of Special Concern, there is reason to monitor their numbers with some care during the next few years. Ruby-throated Hummingbird: Jul (45 +) LEF (BHS), max; a Blue-listed species. Red-headed Woodpecker: poorly reported during the period, this species of Special Concern was recorded at 3 sites in DVC (PBH, RVM, *fide* ATT), 1 in SUC (BAH), 1 in LWC (DJS), 1 in CFC (MDH), and 5 in WMC (SJS, JCR). Acadian Flycatcher: 21 Jun (25) along about 10 km of Shoal Creek, LWC (DJS, SJS), max.

Willow Flycatcher: Another species of Special Concern, this *Empidonax* appears to be doing well in the region. 12-31 May (9 territorial males) CCNWR (JCR) and 11-23 Jun (4 singing) Pool 4, CCNWR (JCR); 17 May-2 Jun (1 singing in atypical habitat; details to be published) Del Rio Pike, WMC (SJS, Pamilla S. Hopkins, m. ob), not seen after last date; 23 May-EOP (up to 8 singing) MOP (DJS, WNJ, m.ob.); 25 May (1 singing; 2 other empidonaces present) Celina, CYC (SJS, DJS); 25 May (1 singing) Livingston, OVC (DFV, Linda Anderson, Betty Worden); (1 singing; tape-recorded) N OVC (RCH, J. David Hassler); 26 May, 22 Jun (1 singing) Smith's Bend, JAC (DFV); 6 Jul (1 singing) DRU (JCR); 31 May (1 +) MC (DFV); the reduction in numbers which occurred at CCNWR and the disappearance of the WMC bird in early June suggest that males of this species may establish territories to which they are unable to draw a mate, causing them to vacate for more promising breeding areas.

Lark-Wren: Horned Lark: 6 Apr (1 "ad feeding a newly fledged bird") Smyrna Airport, RUC (C. Gerald Drewry, Jr.), few NA breeding records in recent years; 3 May (1 ad) Cason Lane, RUC (TJW, DMM); 13-30 May (1 singing) CFC (ELR, Nicky Medley); 30 May (1 ad) LOR (DJS); 8 Jun (1) Glen BBS, GYC (DRJ), only BBS report; all season (4) LIB (DJS); 3 Jul (2) WDR (JRP, HCY); only reports; definitely a declining breeder in the region, though unmentioned on the Blue List. Tree Swallow: 7 Jun (2 + Pairs; at least 2 nests with young) MOP (WNJ, SJS, DJS, CKC); 7 Jun (3 nests, 2 with young and 1 where young had recently fledged) Laurel Hill L., LWC (DJS); 19 Jun (7 birds; at least 2 nests) CCNWR (JCR). Northern Rough-winged Swallow: 25 May (3 pairs nesting in cavities in the underside of 3 different tractor trailers) Celina, CYC (SJS, DJS); details to be published. Bank Swallow: 1 Jun (2) Shoal Creek, LWC (DJS), at site where nesting has occurred in previous years; 16 Jun (1) CCNWR (JCR). Cliff Swallow: continues to move eastward up the river systems of the region; 26 Apr (4 ad) and 9-10 Jul (12) NE of Barton Springs, CFC, on Duck R. (MDH); 16 May (2

colonies) under 2 bridges on Duck R. near Coble, HIC (SJS, BHS); 26 May (12 plus) Hwy 85 at Salt Lick Creek, JAC, on Cumberland R. tributary (DFV); 14 Jun (8 +, but no nests seen) near Ruskin, DIC (SJS, BHS); 21 Jun (30 + active nests) Shoal Creek, LWC (DJS, SJS); large numbers at CCNWR (100) and Cheatham Dam (250 +) where breeding has occurred along the Cumberland R. for many years. Barn Swallow: slightly up on the BBSs, perhaps reversing a longterm trend of decline. Carolina Wren: BBSs show almost total recovery from the losses sustained during the cold winter of 1984-1985.

BEWICK'S WREN: See Introduction for comments on this Blue-listed species; 8 Apr-31 Jul (1) Dover, SWC (JCR), continues a record from Spring 86; 23, 30 Apr (1) Rock Springs Rd., RUC (TJW, *et al.*), not relocated thereafter; 3 May-10 Jun (2, courtship display seen) S of Columbia, MUC (WNJ, CKC, DJS, JRP); 3 May (1) 5 km E of GAL (DTC, JPC); 6-18 May, 20 Jun (1) Hwy 109, WLC, (Earline C. Berry); 17 May (1) near Hobbs Lane, WLC (SJS, RJM, NTOS), not relocated thereafter; 20 May (2) near Bethpage, SUC (Debbie Spero); 6 Jun (1) LOR (DJS), not seen thereafter; 12 Jun, 16 Jul (1) near Hustburg, HPC (CPN, SJS, CKC); 13 Jun (1) Peytonsville BBS, WMC (SJS), at same site in 1983 and 1984; 13 Jun (1) Rocky Hill Rd., RUC (RVM), seen entering and leaving mailbox, and RVM later learned that the mailbox owner had earlier destroyed one or more nests; 14 Jun (1) near Ruskin, DIC (SJS, BHS); Jun (2) N DIC (RJM, *et al.*); 15 Jun (2) Collinwood BBS, LWC (DJS); 17 Jun (1) Patterson Rd., RUC (RVM), perhaps same bird as Rocky Hill Rd., RUC, record, as the 2 sites are only 2 km apart; 30 Jun (1) Simmons Bluff Rd., WLC (SJS, MHI); 27 Jun (2 singing) LWP (CKC), at site last known to be occupied in 1982.

House Wren: Continues to increase in most suburban areas in the northern half of the region; much less reported, but probably present, in southern half; 8 Jun (10 singing males; 8 with mates; at least 4 pairs fledged young) Clarksville, MTC (EJW); 3 Jun-Jul (reported at 7 sites, but many more undoubtedly present) NASH (BAH, ATT, CKC); 19 May-21 Jun (5 pairs) Lebanon, WLC, (RVM *et al.*); 7 Apr-20 Jul (3 + pairs) Murfreesboro, RUC (DMM, Edith Haynes, Alberta Spence); all season (9 + pairs) GAL (DTC, JPC); 25 May (4 singing males) Celina, CYC (SJS, DJS); all season (1 pair) Cookeville (JWW); 10, 12 Jul (1 singing) PIC (RCH).

Gnatcatcher-Grosbeak: Blue-gray Gnatcatcher: only 69 reported on the BBSs (about 60% of 1985 total), but too early to tell if the longterm increase in their numbers has reversed. Eastern Bluebird: 192 were counted on the BBSs, the largest total since 1972, indicating the species is in excellent shape. Brown Thrasher: 1986 saw their numbers decline for the second consecutive year on the BBSs, after many years of slow increase. Cedar Waxwing: The usual sprinkling of summer reports occurred with 1 each in MTC, MUC, SUC, and SWC; see Addenda. Loggerhead Shrike: This Blue-listed species appears to be present in moderate numbers where it is monitored with some diligence: Apr-Jun (65 active sites with at least 10 nests) central WMC (SJS); Jun-Jul (35 active sites with at least 4 nests) south-central and NW LWC (DJS); 23 on the BBSs, a slight increase from 1985. Yellow-throated Vireo: 28 Jun (pair at nest) near Indian Mound, MTC/SWC border (George R. Beringer), a female Brown-headed Cowbird "repeatedly tried to get on the nest . . ., but was fought off each time by the vireos." Warbling Vireo: 6 Jul (5) DRU (JCR), max. **CHESTNUT-SIDED WARBLER:** 7 Jul (1 male) S NASH (Jane C. Maynard), bird seen splashing

about in fountain, the obvious behavior for a nonbreeding visitor in this hot summer; only one other NA summer record. Yellow-throated Warbler: 13-20 Jun (1 eating hard-boiled egg yolk) Byrdstown, PIC (RCH), apparently an attractive food to use at feeders (egg yolk, not warblers!). Cerulean Warbler: May-Jun (3) 2 sites in EWP (PBH), "these birds were much less numerous" than in 1985, "and perhaps did not breed in EWP in 1986"; PBH suspects that "the drought was responsible," as he "didn't see similar loss of birds in sites in west Tennessee that are less subject to drought -- i.e., Hatchie Bottoms and Anderson-Tully" (the soon-to-be Chickasaw NWR). Black-and-white Warbler: 11, 24 Jun (1) RDL (*fide* ATT). American Redstart: 21 Jun (5 singing) Shoal Creek, LWC (DJS, SJS, BHS), max. Scarlet Tanager; 29 Jun (8) SWC (JCR), max. ROSE-BREASTED GROSBEAK: 9-10 Jun (1 male) north-central WMC (Jeanne J. Cobb, David G. Cobb), first NA summer record or new NA late spring date, depending on your druthers. Dickcissel: another species of Special Concern, it appeared to have a good year in 1986, although the 9 reported on the BBSs represented a somewhat low figure; 30 May-24 Jun (5 territorial) CCNWR (JCR); 4 Jun (at least 11 territorial) 3 sites in MTC (EJW, AHH); 9 Jul (2) Belote's Bend BBS, SUC (PBH); 6-16 Jul (7 singing) DRU (JCR, SJS, MHI, CKC), about one-quarter the 1985 total; 26-27 May (3 +) SE of Livingston, OVC (CHB, DPB, PBH); late May (at least 12 singing) 3 sites in WMC (SJS); 7 Jun (2 singing) W of Columbia, MUC (DJS); 6 Jun (1 singing) 8 km E of Bell Buckle, Bedford Co. (SJS); 4 May-2 Jun (8 singing) 2 sites in RUC (ALH, TJW, DMM); 8 Jul (1 singing) near Hillsboro, CFC (ELR); all season (at least 20 singing) many sites in LWC (DJS); 8 Jun (7) Glen BBS, GYC (DRJ); 21-25 Jun (1 singing) near Morris Ferry, FKC (JRP *et al.*), rare in FKC.

Sparrows: **BACHMAN'S SPARROW:** all season (at least 10, including 5 males, 3 females, and 2 imm) Fall River, Giles Co. (DJS), same site as in 1985; the bird at the SWC site (see Spring 86 report) was seen into Jul but observers neglected to submit data, an ill-advised practice where Blue-listed species are concerned. LARK SPARROW: reported Apr-Jul from 2 sites in south-central WLC (RVM *et al.*) and 3 sites in north-central RUC (RVM *et al.*); although not a species of Special or Local Concern, it ought to be. Grasshopper Sparrow: another Blue-listed species reported only in moderate numbers from the following counties: MTC, WLC, JAC, OVC, WMC, CFC, MUC, FKC. Song Sparrow: continues expansion: Jun-Jul (4 singing) CCNWR (JCR); 23 May (1) Patterson Rd., RUC (RVM); 8 Jun (20) Glen BBS, GYC (DRJ); all season (pair nesting) Anne Hettish Bird Sanctuary, RUC (ALH); Jun-Jul (5 + singing) Tullahoma (Ruth Luckado); 24 Jun (1 singing) 100 Oaks Mall, NASH (BAH); Jun-Jul (2 singing) MOP (WNJ, KGA, m. ob.); Jun-Jul (6 singing) GSP (DTC, JPC, SJS, MHI); Jun-Jul (2 singing) LWP (DTC, JPC); Jun-Jul (10 +) MC (DFV), site needs more careful monitoring; 3 Jul (2 singing) WDR (JRP, HCY, SJS); Jun-Jul ("common" breeder) PIC (RCH); 25-27 May (common breeder) Overton County Foray (TOS); Jun-Jul ("abundant breeder") PUC (JWW), it has been only 18 years since the first nest was located in Cookeville (*Migrant* 39: 84, 1968). This species seem to be expanding into middle Tennessee in 2 ways: gradual osmosis westward from the eastern edge of its range along the eastern Highland Rim, and long-range pioneering westward along the river systems of the region, particularly the Cumberland R.

Oriole-Sparrow: Northern Oriole: 30 Apr (pair copulating near site where an old nest was found 5 May) Bull Run Rd., DVC (Andrea L. Hopkins); 17

May (pair) Hobbs Lane, WLC (RJM, BAH, *et al.*), not located thereafter; 6 Jun (1 male singing) Bradyville BBS, CFC (SJS); see Addenda. House Finch: first-ever positive breeding evidence noted in MTC (EJW, Nancy Hughes) and RUC (ALH); suspected breeding noted in CYC (DJS, SJS), PIC (RCH), and PUC (PBH); further breeding noted in DVC (DFV, DOS) and SUC (DTC, JPC). House Sparrow: 16 Jun (ad female feeding young Northern Cardinal) Ellington Agricultural Center, NASH (Roy Anderson).

Addenda: Cedar Waxwing: Jun-Jul 1984 (pair at nest in Virginia pine (*Pinus virginiana*) at height of 12-14 m) Ashland City, Cheatham Co. (Scott C. Gunn, *fide* PBH), constitutes 2nd NA breeding record and first in 56 years. Northern Oriole: 16 Jun 1985 (pair at nest) Neville Bay, LBL (MHI, ECC), now a rare breeder in the region. All nests of these two species should be reported.

Corrigenda: Migrant 56:112, 1985: in entry for Northern (Baltimore) Oriole change "Petonsville" to "Peytonsville."

Locations: BEC-Bear Creek Waterfowl Management Unit, Stewart Co.; CCNWR-Cross Creeks National Wildlife Refuge, Stewart Co.; CCSP-Cumberland City Steam Plant, Stewart Co.; CFC-Coffee Co.; CYC-Clay Co.; DIC-Dickson Co.; DRU-Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co.; DVC-Davidson Co.; EWP-Edwin Warner Park, Davidson Co.; FKC-Franklin Co.; GAL-Gallatin, Sumner Co.; GSP-Gallatin Steam Plant, Sumner Co.; GYC-Grundy Co.; HIC-Hickman Co.; HPC-Humphreys Co.; JAC-Jackson Co.; LBL-Land Between the Lakes, Stewart Co.; LEF-Leiper's Fork, Williamson Co.; LIB-Liberty Grove, Lawrence Co.; LOR-Loretto, Lawrence Co.; LWC-Lawrence Co.; LWP-Lewis Pond, Sumner Co.; MC-Metro Center, Davidson Co.; MOP-Monsanto Ponds, Maury Co.; MTC-Montgomery Co.; MUC-Maury Co.; NA-Nashville Area (includes all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, Wilson Cos., and parts of Dickson and Trousdale Cos.); NASH-Nashville; OHL-Old Hickory Lake (in Davidson, Sumner, Wilson, Trousdale, Smith, and Jackson Cos.); OVC-Overton Co.; PIC-Pickett Co.; PPL-Percy Priest Lake (in Davidson, Rutherford, and Wilson Cos.); PUC-Putnam Co.; PWP-Percy Warner Park, Davidson Co.; RDL-Radnor Lake State Natural Area, Davidson Co.; RUC-Rutherford Co.; SUC-Sumner Co.; SWC-Stewart Co.; WDR-Woods Reservoir, Franklin Co.; WLC-Wilson Co.; WMC-Williamson Co.

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EASTERN RIDGE AND VALLEY REGION - The prolonged drought extended into this period with one account based on tree rings stating 1986 was the driest year since 1711. In the Johnson City area Glen Eller commented June was hot and very dry with only 1.95 inches of rainfall where they usually record over 4 inches. July was still hot and humid, but they did receive almost average rainfall.

Knoxville had the driest summer on record and one of the hottest. Knoxville's June rainfall was 1.8 inches, and July's 1.9 inches was a bit less that normal. For Knoxville this was the third year in a row when summer rainfall was below normal. July was especially hot with several consecutive days of 95°F + temperatures, and 90°F + temperatures on over half the days in the month. Much of their summer rainfall resulted from thunderstorms and was spottily distributed. At Chattanooga the weather pattern continued in a similar fashion with the total rainfall deficit measuring 3.6

inches for the period. The drought conditions produced no noticeable effects on the breeding avifauna. Perhaps the effects may surface in next years numbers and distribution. This is something we should all carefully monitor.

In spite of the weather conditions, this has been one of the most exciting seasons in memory. Over the years we have attempted to document the various raptors nesting in the area. There was a total of 7 active Osprey nests on Watts Bar Lake again, plus one new successful nest near Hiwassee Island on Chickamauga Lake. According to our records, the Chickamauga Lake nest was the first successful nesting in this area since 1971. Through the intense efforts of Paul Mascush and Dale Liner, the elusive Sharp-shinned Hawk and Cooper's Hawk were documented nesting in McMinn and Bradley Counties, respectively.

Tree and Cliff Swallows continue to make news. Tree Swallows were successful in fledging young at Austin Springs and another 5 pairs with nests were recorded at the Kinser Park Golf course in Greene County., Active Cliff Swallow nests were found under various bridges around Boone Lake and they were at 9 different sites in Jefferson, Hamblen, and Grainger Counties. It seems there have always been good Cliff Swallow populations in the Chattanooga area and they have now expanded to other new suitable nest sites.

The House Wren apparently nests in scattered locations around the region. This report contains nest records from Bradley County and Chattanooga.

For the past several years we have strongly encouraged observers to record their observations on the conspicuous nesting Loggerhead Shrike. The birds seem to be disappearing in other sections of the country and we need documentation in order to establish a reference point regarding their distribution in our area for the future. With the sightings recorded in the last report and with those in this one, we now possess the finest documentation yet recorded for the species in the region.

We have always been impressed with the possibility of the wide variety of species that are yet to be documented in the wide expanse of the Cumberland Mountains and Plateau. Nicholson has shown us again what one person can find by persistent and diligent searching. His recording of Black-throated Blue Warblers nesting at Frozen Head Mountain is the first for the Cumberland Mountains of Tennessee. There is one previous record of the species nesting at Savage Gulf on the Cumberland Plateau (Ganier, *Wilson Bull.* 35:26-34, 1923).

The Grasshopper Sparrow is one species we have stressed obtaining documentation on their nesting distribution over the years. This season we are proud to say reports were received from many locations with a most impressive tally of 40-50 singing males along the Brainerd Levee in Chattanooga.

This summary concludes our 35th report since the first one submitted in June 1978. We wish to thank the many cooperators who have so diligently forwarded their observations and comments over the years. Because of these many field workers and their unselfish efforts, we now possess the finest distribution knowledge yet for the region. However, we are also the first to admit the surface has only been touched and there is still much more

to be learned. We heartily wish the best to our successor Rick Knight.

Loon-Ibis: Common Loon: 8 Jun (1) Nickajack L. (JSL, Randall L. & Linda Kay Doyle); 28 Jun (1) Tellico L. (Frank Bills). Double-crested Cormorant: 6 Jun (1) HRA, Meigs Co. (CPN). Great Egret: 4-31 Jul (1-2) SAB (KHD, LHD); 6 Jul (4-9) HRA (DCC, Jay W. Knott); 19 Jul (6) DOL (JAK); 27-30 Jul (2-3) HRA, (KHD, LHD, Wesley K. James). Little Blue Heron: 23 Jun (2) SAB (KHD, LHD); 6 Jul (10) HRA, (DCC); 27 Jul (4) HRA (KHD, LHD). Black-crowned Night-Heron: new colony discovered in Pigeon Forge, Sevier Co., 50+ nests (J.B. Owen); 5 Jun (1) NRL (JCH) - not a known nesting area; 19 Jul (50 +) CRL (RLK). White Ibis: 1 imm at EBF from 7 Jul to EOP (LJF *et al.*); 27 Jul (1 imm) CHA (Gilda Lyon).

Goose-Hawk; Canada Goose: 2 pairs fledged 15 y AUS (RLK *et al.*). Lesser Scaup: 27 Jul (1 female) KSP (KHD, LHD). Osprey: 5, 10, 16 Jun (1) Hiwassee R., POC (JCW); 13 Jun (1) s Knoxville (PDH), neither of these reports from known nesting locations; 9 active nests on Watts Bar L., and 1 on CHL (TEB). Bald Eagle: 3-20 Jun (1 ad), 30 Jun (1 imm) NRL (JCH); 29 Jun (1 ad) TRG, MAC (Barbara T. Claiborne). Sharp-shinned Hawk: active nest McMinn Co., y banded (PGM, JDL); 1 Jun (1) TRG, MAC (KHD, LHD); 14 Jun (1) Louisville, BLC (JAK); 20, 22 Jun (1) Signal Mt. (JSL); 25 Jul (1) s KNC (PDH); 26 Jul (1) White Pine (JAK). Cooper's Hawk: 22 Jun (active nest, 3 y banded) BYC (PCM, JDL); 19 Jul (1) AUS (RLK); 17 Jul, 3 Aug (1) Seymour (PDH).

Moorhen—Barn-Owl: Common Moorhen: 8-14 Jun (1) BLC (PDH), bird left after cows destroyed vegetation around pond. Semipalmated Plover: 27 Jul (1) KSP (KHD, LHD). Killdeer: max 23 Jul (142) EBF (LJF). Lesser Yellowlegs: 4 Jul (2) KSP (RC); 27 Jul (2) KSP (KHD, LHD); 29 Jul (2) JNB (RLK). Spotted Sandpiper: 24 Jun (1) Hiwassee R., POC (JCW); 19 Jul (2) CRL (RLK); 27 Jul (1) KSP (KHD, LHD); 29 Jul (1) JNB (RLK). Semipalmated Sandpiper: 1 Jun (25) KSP (KHD); 20 Jul (8), 27 Jul (10) KSP (KHD, LHD). Least Sandpiper: 20 Jul (6) KSP (KHD, LHD); 29 Jul (2) JNB (RLK). White-rumped Sandpiper: 1 Jun (1) KSP (KHD); 2 Jun (3) KSP (RC). Pectoral Sandpiper: 20 Jun (1) KSP (KHD, LHD); 27 Jul (15) KSP (KHD, LHD); 29 Jul (7) JNB (RLK). Dunlin: 1 Jun (1) KSP (KHD). Stilt Sandpiper: 26 Jul (10) Dutch Bottoms, DOL (JAK). Ring-billed Gull: 7 Jun (3) Cherokee Dam, Grainger/Jefferson Co. (JAK); 20 Jul (1) NRL, Union Co. (CPN). Black Tern: 13 Jul (20) CHL (Dan N. Williams, Jr.). Common Barn-Owl: 5-7 Jul (1) GNC (RN).

Woodpecker-Shrike: Red-headed Woodpecker: pair with young, Limestone, WGC (RLK *et al.*); 28 Jun (1) BLC (PDH). Willow Flycatcher: 2-3 pairs regular AUS (RLK *et al.*); 4 Jun (1-2) HRA (CPN, Johnny T. Parks); 5 Jul (1) Stinking Creek, Campbell Co. (JCH). Horned Lark: 26 May (1 singing) Fentress Co. (CPN); 14 Jun (1) NE BLC (PDH), different location from BLC report in last report. Tree Swallow: pair with 4 fledged y AUS (RLK *et al.*): 5 pairs with nests at Kinser Park Golf Course, GNC (DJN). Bank Swallow: 1 Jun (56 active nest holes) KSP (KHD); nested again Mascot, KNC (JAK *et al.*). Cliff Swallow: 10-12 active nests under bridges around Boone L. (RLK *et al.*); 9 sites in Jefferson, Hamblen & Grainger Cos. with minimum of 274 nests (JAK); 25 Jun (11 active nests) Snow Hill Bridge, SAB (KHD, LHD); 6 Jul (193 active nests) Veterans Bridge, CHA (J. Thomas & David C. Patton); 7 Jul (200 active nests) C. B. Robinson Bridge, CHA (KHD); when one considers these sites with the other known active locations it certainly

appears we have an increasing population. House Wren: 5 pairs or singing individuals GNC (VNM, DJN, RN, WRN, BKB, William K. Gaut, Margaret S. Gaut); pair with 2 broods Maryville, BLC (JAK); pair with 2 active nests Cleveland, BYC (Paul H. Dietrich); pair with 2 active nests CHA (John Whitaker). Cedar Waxwing: numerous throughout JNC area (LHTOS); 3 different locations at lower elevation GNC (BKB, DJN); numerous small flocks and twos reported through season at ANC, Claiborne Co., Seymour (PDH, CPN, GWN); no nests reported from any of these areas. Loggerhead Shrike: 6-8 Jun (1) Mosheim, GNC (Linda J. Northrop); pair with 2 y at Limestone, WGC (RLK *et al.*); 17-20 Jun (pair with nest) GNC (BKB); reported from Sevier Co. (ad with fledgling), at 4 locations in BLC, including fledglings at 2 locations, pair in W KNC, single birds at 1 location each in Campbell, Claiborne, and Meigs Cos. (PDH, GWM, CPN, JAK).

Vireo-Finch: Solitary Vireo: 9 Jun (1) Jones Gap Breeding Bird Survey, Bledsoe Co. (KHD, LHD). Warbling Vireo: 14-30 Jun (1) Holly Creek on Old Tusculum Rd., GNC (BKB, DJN, NPB). Blue-winged Warbler: male from last period remained singing in CHA on its Davidson Rd. territory until 22 Jun (Robin A. Rudd). Chestnut-sided Warbler: 7 Jun (1) Oneida, Scott Co. (CPN), not regular breeding area. **BLACK-THROATED BLUE WARBLER:** 9 Jun (several agitated pairs, and pair with just fledged young) Frozen Head Mountain, Morgan Co. (CPN), first confirmed breeding evidence from Cumberland Mountains of Tennessee. Prothonotary Warbler: 3 pairs feeding y GNC (DJN *et al.*). Canada Warbler: 9 Jun (several agitated pairs) Frozen Head Mountain, Morgan Co. (CPN), same area as reported last summer. Yellow-brested Chat: pair nested in old mail box and successfully fledged 4 y (Cynthia D. Cragin, Herb E. Cragin) - an unusual nest site for the species. Blue Grosbeak: above average numbers in JNC area (LHTOS). Grasshopper Sparrow: above average numbers in JNC area (LHTOS); 13 different singing individuals from GNC (BKB, DJN, RN, WRN); in BLC at 10 locations in 2 atlas blocks (PDH), and 13 at 8 locations (JAK); 10 singing birds in 4 atlas blocks in Claiborne Co. (GWM); 1 in NE ANC and 1 in N Hamilton Co. (CPN); 3 at 1 location in Loudon Co. (Marc & Laurie Armstrong); 40-50 singing along Brainerd Levee, CHA (Barbara G. & Michael A. McMahan). Northern Oriole: 8 Jun (1 male) Cove Lake, Campbell Co. (GWM), has nested at this location in previous years. House Finch: several reports of adults feeding y at JNC (LHTOS); several broods reported in KNC, BLC, and ANC (many observers, *fide* CPN); 7 Jun (2) Onieda, Scott Co. (CPN), first county record from county with no resident birders. Pine Siskin: 3, 7 Jun (1) Signal Mt. (JSL).

Locations: ANC-Anderson Co.; AUS-Austin Springs, Washington Co.; BLC-Blount Co.; BYC-Bradley Co.; CHA-Chattanooga; CRL -Cherokee Lake; CHL-Chickamauga Lake; DOL-Douglas Lake; EBF-Eagle Bend Fish Hatchery, Anderson Co.; GNC-Greene Co.; HRA-Hiwassee River Area; JNB-Jonesborough; JNC-Johnson City; KSP-Kingston Steam Plant, Roane Co.; KNC-Knox Co.; MAC-Marion Co.; NRL-Norris Lake; POC-Polk Co.; SAB-Savannah Bay, Hamilton Co.; TRG-Tennessee River Gorge; WGC-Washington Co.

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EASTERN MOUNTAIN REGION--Temperatures during both June and July were above normal. The drought continued, and June rainfall was about 2 inches, half the normal amount. July rainfall was near normal, but

the rainfall deficit for the year was 8 inches at the end of the period. No apparent effects of the drought on nesting birds were reported.

Night-Heron—Owl: Yellow-crowned Night-Heron: adults with y reported from 3 areas near ELI (GDE, GOW *et al.*). Canada Goose: 2 Jun (2 ad, 3 y) ELI (*fide* GDE). Wood Duck: good nesting results in ELI area (LHTOS). Black Vulture: 1 Jun-16 Jul (2) GSMNP (RLK *et al.*). Sharp-shinned Hawk: 2 Jun, 14 Jul (1) GSMNP (RLK *et al.*). Peregrine Falcon: young again hacked at Greenbriar Pinnacle, GSMNP (RLK *et al.*). Solitary Sandpiper: 28 Jul (1) SJP (RLK), first fall report. Spotted Sandpiper: 29 Jul (1) RNC (RLK), first fall report. Least Sandpiper: 29 Jul (2) RNC (RLK), first fall report. Pectoral Sandpiper: 29 Jul (1) RNC (RLK), first fall report. Herring Gull: 7 Jun (1) WTL (GDE), late. Forster's Tern: 27 Jul (1) WTL (GDE). Yellow-billed Cuckoo: more numerous than normal in ELI area (LHTOS). Great Horned Owl: 1-2 through period at South Holston Lake (Richard P. Lewis). Barred Owl: 7 Jun (1) Iron Mountain Gap (SG).

Flycatcher-Siskin: Alder Flycatcher: 1 Jun-12 Jul (1-4) RNM above 5000 ft. (RLK, ECC, MHI). Horned Lark: 1-24 Jun (1-4) Siam Valley, Carter Co. (GOW *et al.*). Common Raven: 1-3 regular at RNM, GSMNP (RLK *et al.*). Winter Wren: common on RNM (LHTOS). HERMIT THRUSH: 6 Jun (1 singing) RNM above 5000 ft. (RLK). Cedar Waxwing: abundant through period in ELI area (LHTOS); fairly common in GSMNP through 16 Jul (RLK *et al.*). Warbling Vireo: 1-30 Jun (pair) ELI (GDE). Blue-winged Warbler: 7 Jun (4 singing males) Polk Co. (Chattanooga Chapter, TOS). House Finch: several reports of broods in ELI area (LHTOS). Red Crossbill: 12 Jul (2 ad feeding 5 y) RNM (DCC, RJH, PCH); 1 Jun-16 Jul regular, max 3 Jun (9) GSMNP (RLK). Pine Siskin: 2 Jun (1) GSMNP (RLK); 6 Jun (1) RNM (RLK).

Locations: ELI-Elizabethton, Carter Co.; GSMNP-Great Smoky Mountains National Park, Sevier Co.; RNC-Roans Creek, Johnson Co.; RNM-Roan Mountain, Carter Co.; WTL-Watauga Lake.

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DPB - Dianne P. Bean
TEB - T. Edward Beddow
BKB - Ben K. Britton
EB - Edward Britton
NPB - N. Phine Britton
CHB - Carolyn H. Bullock
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DCC - David C. Chaffin
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RC - Richard Clark
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NTOS - Nashville Chapter, TOS
TWRA - Tennessee Wildlife Resources Agency

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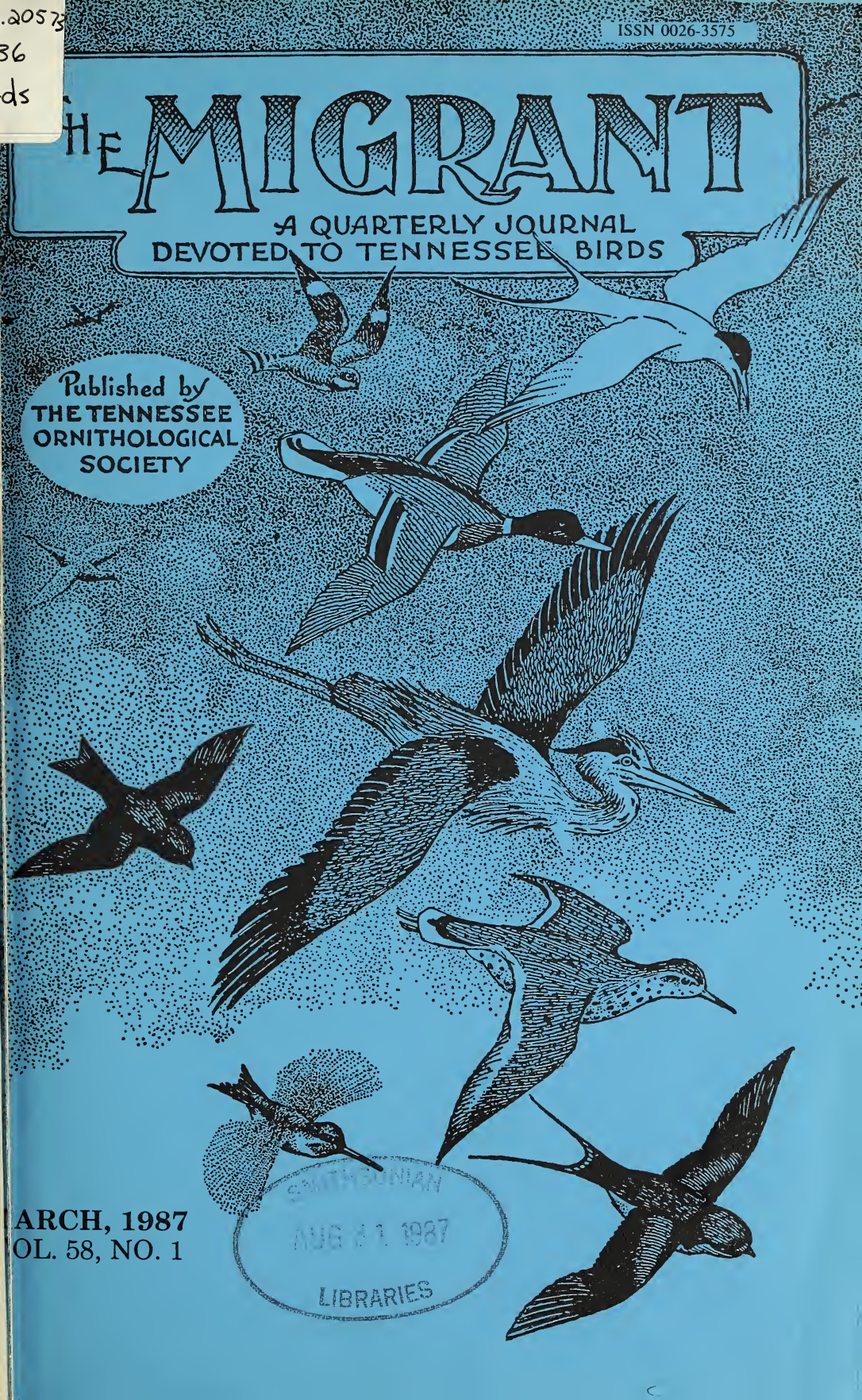

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THE 1986 CHRISTMAS BIRD COUNT

Damien J. Simbeck

A total of 142 species were found in Tennessee during the 1986-87 CBC season, with two additional species found during count week. Mild weather before and during the season had a noticable effect on most counts. No count reported a high temperature below freezing, and only one had snow. Many lingering species were found, with Yellow-crowned Night-Heron (5th Tenn. CBC record), Greater White-fronted Goose (7th), Merlin (9th), Lesser Yellowlegs (4th), Common Nighthawk (2nd), Tree Swallow (3rd), and Solitary Vireo (9th and 10th) most notable. House Wrens were found on 6 counts, but were only documented on 2 of these. Low numbers were found of most nothern passerines, with most reports from eastern counts. Northern Goshawks on 2 counts were notable (7th and 8th records). Waterfowl numbers were down on most counts, while numbers for most raptors and Loggerhead Shrikes were up.

Two species were added to the Tennessee CBC list this year, and another from a late report from last year. Sanderling and the *Empidonax* flycatcher were probably both present due to the mild weather. These three additions bring the total count to about 213 species.

Two counts appear in the summary for the first time. These are Dresden and Nickajack Lake.

Compliers are asked to send in complete data for their count, including documentation of unusual species. Although some species are fairly common in this state, and are late migrants or winter invaders, their occurrence on CBC's is irregular. Many compilers sent only the observer's name as "documentation". Full documentation should include: Observer's name, location of the bird, and a FULL DESCRIPTION of the bird seen. Species reported this year without such documentation included Green-backed Heron, Greater White-fronted Goose, Osprey, Rough-legged Hawk, Merlin, Tree Swallow, House, Sedge, and Marsh Wrens, LeConte's Sparrow, and Northern Oriole. In the future, compilers should have the observers of unusual species submit a written description of the bird, and forward a copy to the state compiler. Blanks have been left in the count summary for data that was not submitted.

As usual, the counts are tabulated from west to east.

THE 1986 CHRISTMAS BIRD COUNT

	MEMP	REEL	DRES	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	PICK	NIC1	NIC2	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Common Loon	--	1	--	--	--	--	--	--	--	24	--	1	5	--	2	4	22	1	--	6	--	--	--	--	3	--
Pied-billed Grebe	21	10	--	16	5	1	7	--	5	51	3	8	8	4	350	139	165	38	1	48	--	1	13	11	5	--
Horned Grebe	--	5	--	1	--	--	--	--	--	66	--	--	11	1	4	8	54	--	--	--	--	--	--	--	--	--
Dbl.-cr. Cormorant	17	1	--	--	--	--	1	--	--	--	--	4	3	--	--	1	1	4	--	--	--	--	--	--	--	--
Great Blue Heron	26	114	4	104	--	8	24	4	14	35	6	45	31	1	125	105	64	214	4	119	1	13	64	6	5	--
Green-backed Heron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	1	--	1	--	--	--	--
Blk.-cr. Night-Heron	--	--	--	--	--	--	--	--	--	42	--	--	--	--	--	--	--	--	--	13	5	--	10	--	--	--
Yel.-cr. Night-Heron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2*	--
Gr. White-fr. Goose	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Snow Goose	--	15*	--	--	--	--	4*	1*	--	--	--	--	1*	--	--	--	--	1*	--	--	--	--	--	--	--	--
Canada Goose	3	28.1M	--	11.2M	43	--	208	14	165	1030	--	1033	860	--	--	72	16	910	27	59	--	20	249	64	8	--
Wood Duck	8	27	2	6	--	--	2	--	8	2	--	2	2	--	8	5	28	--	--	--	2	--	6	--	--	--
Green-winged Teal	3	19	--	57	--	--	1	--	--	1	--	--	--	--	--	--	--	25	--	--	--	--	--	--	--	--
Amer. Black Duck	--	790	--	917	--	--	18	--	12	2	--	119	24	--	16	50	11	357	2	11	--	105	--	10	7	--
Mallard	173	57.4M	--	4927	15	12	112	--	64	323	6	489	178	17	94	255	218	2000	--	103	--	454	137	70	61	--
Northern Pintail	--	8	--	51	--	--	--	--	--	1	--	33	--	--	1	--	--	80	--	--	--	--	--	--	1	--
Blue-winged Teal	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Northern Shoveler	--	10	--	10	--	--	16	--	--	--	--	2	--	--	--	1	1	1	--	--	--	--	--	--	--	--
Gadwall	3	3250	--	480	1	--	23	--	41	12	--	28	--	--	790	665	188	68	--	57	--	--	20	2	1	--
American Wigeon	3	2025	--	659	--	--	15	--	42	--	--	73	--	--	12	68	32	96	--	--	--	--	1	8	--	--
Canvasback	1	50	--	33	--	--	17	--	7	2	--	--	7	--	2	--	10	--	--	--	--	--	--	--	--	--
Redhead	1	30	--	17	--	--	6	--	--	--	--	--	--	--	--	2	30	2	--	--	--	--	--	--	--	--
Ring-necked Duck	2	350	--	1655	--	--	41	--	54	6	--	59	6	--	30	17	158	404	--	25	--	--	--	27	2	--
Greater Scaup	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	8	180	--	--	--	--	--	--	--	--	--
Lesser Scaup	5	40	--	35	--	2	17	--	88	30	--	--	--	47	41	100	30	2	--	--	--	--	--	--	--	--
Common Goldeneye	--	4	--	4	--	--	7	--	7	16	--	13	3	--	4	53	154	1	--	--	--	--	--	--	--	--
Bufflehead	--	135	--	--	--	--	8	--	29	68	--	130	9	--	24	27	60	--	--	--	--	2	--	5	115	--
Hooded Merganser	1	68	--	104	--	--	35	--	2	40	--	157	31	--	45	32	15	79	--	33	--	--	--	5	--	--
Common Merganser	--	3	--	4	--	--	--	--	--	--	--	12*	--	--	--	20	3	--	--	1	--	--	--	--	--	--
Red-br. Merganser	--	1	--	3	--	--	--	--	--	1	--	--	4	--	1	26	1	25	--	1	--	--	--	--	--	--
Ruddy Duck	1	4700	--	8	--	--	20	--	--	--	--	--	--	--	150	300	46	6	--	--	--	--	--	2	--	--
Black Vulture	--	4	130	46	12	--	55	59	48	--	36	16	132	--	7	54	--	63	--	--	--	--	120	37	--	--
Turkey Vulture	--	8	70	7	45	--	1	--	--	--	2	22	23	10	--	--	7	11	--	--	1	--	162	6	1	--
Osprey	--	--	--	--	--	--	--	--	--	--	--	1*	--	1*	--	--	--	1*	--	--	--	--	1	--	--	--
Bald Eagle	--	108*	--	6*	--	--	--	--	--	--	--	--	2*	2*	5*	8*	3*	8*	--	--	--	--	--	--	--	--
Northern Harrier	7	5	--	8	8	--	2	6	4	1	3	--	--	1	1	1	--	4	--	4	--	--	--	--	--	--
Sharp-shinned Hawk	3	1	--	6	1	2	1	1	3	1	1	1	3	--	6	5	5	2	2	4	--	1	3	--	5	--
Cooper's Hawk	--	1	--	2	1	2	5	3	3	4	1	1	2	--	4	2	1	1	--	1	--	2	3	1	3	--
Northern Goshawk	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	1*
Red-shouldered Hawk	2	16	3	14	3	6	1	1	3	1	1	2	--	--	11	7	11	14	1	4	--	--	--	--	1	--

	MEMP	REEL	DRES	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	PICK	NIC1	NIC2	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Red-tailed Hawk	41	47*	10	31	25	14	33	24	38	17	38	13	17	--	41	17	33	22	3	23	5	18	9	8	6	1
Rough-legged Hawk	1	1	--	--	--	--	1	--	--	--	--	2*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Golden Eagle	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--
American Kestrel	27	69	18	11	34	21	65	18	59	36	85	19	50	6	11	12	18	14	5	18	16	13	24	21	12	2
Merlin	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ruffed Grouse	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	2	--	1	--	2	--
Wild Turkey	8	6	--	--	--	--	--	1	--	--	--	--	--	8	--	--	--	--	--	--	--	--	--	--	--	--
Northern Bobwhite	64	6	38	37	32	19	28	20	5	37	25	2	11	--	3	4	32	28	8	28	2	20	--	--	4	--
Virginia Rail	--	--	--	1*	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sora	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Coot	78	90	--	52	--	2	11	--	--	76	10	166	16	4	10M	9000	3224	745	--	42	--	--	19	2	--	--
Sandhill Crane	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	104	--	--	--	--	--	--	--	--
Killdeer	486	165	18	122	124	43	61	12	55	111	58	6	28	10	44	10	342	390	30	254	53	72	133	3	50	2
Lesser Yellowlegs	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Spotted Sandpiper	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--
Sanderling	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--
Least Sandpiper	7	--	--	2*	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
Dunlin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6	--	3	--	--	--	--	--	--
Common Snipe	26	81	23	20	--	--	34	--	11	75	42	--	--	--	33	--	32	98	--	12	2	--	--	--	8	--
American Woodcock	1	--	--	1	--	--	1	--	--	2	--	--	--	--	--	1	3	--	1	--	--	--	--	--	1	--
Bonaparte's Gull	--	234	--	--	--	--	--	--	--	2	--	--	--	--	1	2	9	--	--	--	--	--	--	--	--	--
Ring-billed Gull	232	229	--	30	--	--	1	--	--	811	--	330	30	1	152	225	730	533	--	223	--	--	15	59	--	--
Herring Gull	--	10	--	2	--	--	--	--	--	23	--	--	12	1	13	5	16	1	--	2	--	--	--	--	--	--
Rock Dove	1	61	31	8	25	194	148	43	109	187	40	8	48	11	250	95	766	46	98	425	134	316	667	80	129	--
Mourning Dove	526	115	32	414	347	171	124	104	416	365	64	51	108	84	525	170	776	692	113	583	260	408	215	108	217	4
Common Barn-Owl	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Eastern Screech-Owl	--	3	2	5	6	--	3	5	1	4	--	--	--	--	7	9	13	7	2	10	3	5	3	--	5	3
Great Horned Owl	1	3	1	11	9	1	10	4	9	2	2	--	--	1	6	2	4	5	1	6	2	--	5	18	5	2
Barred Owl	2	17	2	7	3	--	4	3	4	--	--	1	1	--	7	2	1	3	2	--	--	--	--	1	1	--
N. Saw-whet Owl	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--	--	--
Common Nighthawk	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--	--
Belted Kingfisher	12	11	3	28	11	7	13	4	13	28	8	17	--	2	39	32	33	23	2	52	15	9	36	5	21	8
Red-headed Woodpecker	27	53	5	2	18	1	3	3	--	--	--	--	5	3	13	7	7	7	1	--	1	--	1	--	2	--
Red-bel. Woodpecker	113	110	20	59	35	45	68	30	115	28	13	20	18	21	46	53	52	28	8	38	9	25	17	6	17	1
Yellow-bel. Sapsucker	27	14	4	14	7	11	24	10	23	14	11	2	3	6	32	17	29	8	2	15	5	4	2	1	12	1
Downy Woodpecker	74	52	13	47	22	49	54	20	117	47	16	23	15	5	57	43	61	25	11	32	52	25	36	9	27	6
Hairy Woodpecker	11	16	3	5	12	6	8	3	21	4	3	11	1	1	9	7	12	6	5	8	17	4	8	1	4	--
Northern Flicker	117	114	46	37	15	103	47	31	106	47	16	8	24	17	79	53	65	42	8	45	10	7	20	18	27	1
Pileated Woodpecker	12	30	2	17	16	15	12	10	36	8	1	3	--	8	37	31	15	15	10	21	31	11	19	6	10	--
Eastern Phoebe	--	9	1	3	3	1	1	1	4	--	--	--	1	4	17	8	12	7	--	7	11	--	6	2	5	1
Horned Lark	146	343	--	8	150	2	31	--	19	--	--	--	--	--	78	18	--	--	--	--	--	--	--	--	--	--
Tree Swallow	--	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Blue Jay	327	84	93	156	268	313	88	138	284	124	64	71	193	106	500	375	404	268	88	254	62	71	184	84	172	25
American Crow	131	131	48	303	520	250	97	116	2946	208	126	122	1032	102	600	395	706	450	378	370	288	326	570	382	1304	220
Common Raven	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--	4	3

	MEMP	REEL	DRES	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	PICK	NIC1	NIC2	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Carolina Chickadee	254	163	49	107	77	130	100	92	316	107	40	50	3	21	275	215	323	131	68	317	274*	113	136	43	107	41
Tufted Titmouse	75	81	29	114	90	91	90	57	285	48	37	51	8	34	125	108	193	56	21	112	82	96	59	16	78	29
Red-br. Nuthatch	8	3	--	--	1	3	1	--	3	2	--	--	--	--	9	37	6	5	6	7	15	1	5	--	6	10
White-br. Nuthatch	1	25	3	26	47	30	6	1	89	--	--	3	6	8	52	18	42	14	26	28	55	9	25	7	25	8
Brown-h. Nuthatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	6	--	--	--	--	--	--	--	--
Brown Creeper	14	12	--	5	2	3	5	2	16	1	9	3	--	--	17	11	15	4	1	4	12	2	5	1	4	1
Carolina Wren	115	91	5	41	33	37	49	12	111	52	14	4	6	5	94	113	136	66	31	143	42	32	60	26	81	25
Bewick's Wren	1	--	--	--	--	--	2	2	--	--	--	2*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
House Wren	--	1	--	--	--	1	2	--	--	2*	--	--	--	--	2*	4	--	--	--	--	--	--	--	--	--	--
Winter Wren	9	18	3	5	1	--	6	1	20	3	2	--	--	3	9	13	10	5	4	8	2	2	5	2	8	3
Sedge Wren	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	-	--	--	--	--	--
Marsh Wren	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Golden-cr. Kinglet	22	14	6	14	7	23	11	4	44	47	3	5	--	--	116	127	34	108	48	98	86	6	20	14	60	28
Ruby-cr. Kinglet	35	20	--	1	3	4	5	3	8	1	--	2	--	--	57	69	74	44	3	26	8	5	2	2	11	1
Eastern Bluebird	18	11	33	90	59	75	140	66	116	28	43	96	20	56	268	124	151	175	18	114	116	33	77	70	92	22
Hermit Thrush	6	24	3	3	1	3	7	14	11	6	--	3	1	--	27	21	14	7	2	11	6	--	4	--	5	5
American Robin	621	171	1	305	104	646	1025	53	2388	426	376	362	31	6	2250	317	267	282	318	383	757	8	96	42	61	1
Nor. Mockingbird	125	39	17	26	34	70	59	64	201	95	42	29	75	15	62	68	92	41	10	109	17	17	44	37	72	1
Brown Thrasher	18	12	4	4	2	1	2	--	4	4	3	1	3	--	42	38	31	9	3	7	1	1	--	--	2	--
Water Pipit	--	10	--	37	--	--	--	--	--	--	--	--	--	--	27	38	--	29	--	3	--	--	3	--	--	--
Cedar Waxwing	55	45	18	89	10	194	131	--	79	8	--	98	--	16	264	268	322	321	20	553	134	117	31	49	240	--
Loggerhead Shrike	18	20	1	14	29	9	26	28	23	6	18	4	11	--	6	3	3	16	1	11	--	2	1	2	--	--
European Starling	2912	6945	460	395	2414	1834	500M	380	8703	2279	2210	271	--	130	6000	885	1406	2200	280	4809	498	640	2855	815	1415	184
Solitary Vireo	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	2*	--	--	--
Yellow-r. Warbler	104	105	19	4	--	21	8	14	8	25	1	7	--	11	128	146	145	162	13	182	34	35	37	10	60	--
Pine Warbler	--	--	--	--	2	--	--	--	--	--	--	--	3	--	16	18	46	57	--	2	1	--	--	--	--	--
Palm Warbler	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5*	3*	--	--	--	--	--	--	--	--	--	--
Northern Cardinal	540	213	89	349	237	321	317	202	548	257	103	75	51	39	255	316	175	109	75	220	72	123	110	37	158	37
Rufous-sided Towhee	38	7	7	46	52	72	55	28	125	82	20	5	5	11	162	123	90	47	30	75	18	8	26	4	23	6
Amer. Tree Sparrow	--	6	1	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chipping Sparrow	--	--	--	--	--	1	--	--	--	--	--	--	--	--	5	36	10	5	3	--	--	--	--	--	--	--
Field Sparrow	77	36	37	110	341	10	100	105	116	83	60	42	12	33	425	320	147	249	65	179	29	36	72	33	146	30
Vesper Sparrow	3	--	--	--	1	--	--	--	--	--	--	--	--	--	--	21	3	20	--	--	--	--	--	--	--	--
Savannah Sparrow	220	1	--	12	68	5	9	--	1	27	--	--	--	--	33	166	28	29	--	5	1	--	--	--	2	--
LeConte's Sparrow	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fox Sparrow	16	10	2	9	2	4	9	3	5	14	2	2	--	--	5	4	7	3	--	--	1	1	--	--	2	2
Song Sparrow	98	159	30	211	168	46	137	72	184	402	19	25	33	32	600	478	577	216	63	372	128	73	133	42	248	89
Lincoln's Sparrow	--	--	--	--	1*	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--
Swamp Sparrow	55	98	27	258	22	1	44	5	13	73	2	1	--	--	63	48	50	96	13	16	2	--	6	--	1	3
White-thr. Sparrow	775	364	56	355	189	154	246	47	602	334	81	61	4	49	490	584	203	310	85	466	133	11	102	49	322	64
White-cr. Sparrow	83	4	1	12	14	--	59	8	4	8	6	7	1	2	3	--	5	2	11	58	--	16	3	1	4	--
Dark-eyed Junco	262	130	75	316	151	175	134	175	491	115	26	89	22	52	138	480	129	88	51	38	146	61	116	83	167	147
Lapland Longspur	--	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Red-wing. Blackbird	111	3321	308	665	77M	65	200M	524	801	3130	22	9	51M	--	39	137	2402	2680	--	199	17	--	--	--	--	--
Eastern Meadowlark	352	95	65	121	232	133	109	92	71	72	48	19	69	23	195	89	484	272	36	96	12	33	44	14	33	21

	MEMP	REEL	DRES	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	PICK	NIC1	NIC2	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Rusty Blackbird	1001	8	7	17	300	--	100M	--	--	2	1	--	50	--	20	6	91	--	--	--	--	--	--	--	--	--
Brewer's Blackbird	--	8	--	--	157	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Common Grackle	3512	1845	1900	230	315.4M	96	10M	13	237	21	5000	156	10.5M	1	450	46	804	330	--	662	--	4	--	1002	--	1
Brown-h. Cowbird	626	1801	--	301	723	93	200M	653	333	5	137	120	--	--	26	31	132	10	--	100	--	2	--	--	--	--
Northern Oriole	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Purple Finch	26	4	--	19	31	15	138	23	21	8	31	24	--	9	181	128	19	39	29	59	5	66	25	9	14	4
House Finch	28	--	--	--	--	95	182	65	195	38	97	195	27	1	200	141	86	6	50	384	26	280	248	163	173	24
Red Crossbill	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24	--	--	--	8	--
Pine Siskin	4	4	--	2	--	51	18	2	6	3	--	3	--	--	50	6	146	8	9	86	453	57	2	--	25	--
American Goldfinch	81	94	24	265	102	111	225	99	283	49	78	76	29	18	1120	490	496	248	75	273	131	172	210	60	155	21
Evening Grosbeak	--	--	1	--	--	--	--	--	--	--	--	3	--	--	2	--	9	--	--	--	108	--	12	--	2	2
House Sparrow	138	1216	245	61	339	199	54	38	85	77	35	26	453	9	65	65	150	9	28	62	48	73	114	99	216	72
Total Species	87	105	58	94	70	65	97	63	78	86	58	78	66	53	97	98	100	99	60	79	64	58	69	61	74	45

M = 1000 * = See information on the counts. Underlined numbers tie or exceed record highs.

INFORMATION ON THE COUNTS

MEMPHIS—21 Dec.; 0700-1615; partly cloudy; temp. 31-50° F; wind var. 2 mph; 39 observers in 8-14 parties; 127 party hours (95 on foot, 32 by car); 193 party miles (73 on foot, 120 by car). Low numbers for many sparrows; lowest ever for W-throated since 1934, except during WWII (*fide* BBC). Good details submitted for Merlin (MW, DD) and LeConte's Sparrow (LC). House Wren deleted - details suggest Winter Wren - (DJS). 86 species, 126,038 individuals. Dianne and William Bean, Carolyn Bullock, Fred Carney, Tina Carpenter, Robert Casey, Ben and Lula Coffey (compilers - 672 N. Belvedere, Memphis 38107), Chris Creech, Dollyann Daily, Julian Darlington, Fred Dickson, Helen Dickelspiel, Harold Elphingstone, John Embury, Robert Endres, James Ferguson, Bill Fowler, Joe Guinn, Van Harris, Ginger and Robert Ilardi, David Kesler, Jo Levy, Selma Lewis, Dwight Miller, James Olcese, Gerald Papachristou, George Payne Jr., Bill and Rob Peeples, Ernest Restivo, Virginia Reynolds, Arlo and Noreen Smith, Richard Taylor, Martha Waldron, Richard Whittington, Patricia Wood.

REELFOOT—20 Dec.; 0630-1630; partly cloudy with AM fog; temp. 28-51° F; wind N 0-3 mph; 10 observers in 6 parties; 50 party hours (8 on foot, 36 by car, 6 by boat) plus 1 owling; 488 party miles (19 on foot, 457 by car, 14 by boat) plus 10 owling. One of the Red-tailed Hawks was reported as "Harlan's" race, but no details were submitted. No details were submitted for any unusual species. 70 of the eagles were adults; 10 of the Snow Geese were blue form. Also seen: 750 scaup spp., 500 gull spp. 105 species plus 2 forms, 123,699 individuals. Don Manning (compiler - Rt. 1 Box 303, McKenzie 38201). Participants names not submitted.

DRESDEN—3 Jan.; 0700-1700; AM - partly cloudy, PM - partly cloudy with light rain; temp. 25-39° F; wind NW 0-15 mph; 8 observers, 4 in 2 parties plus 4 at feeders; 18 party hours (8 on foot, 10 by car) plus 8 at feeders, 4.5 owling [when? - DJS]; 80 party miles (5 on foot, 75 by car) plus 10 owling. 60 species, 4,141 individuals. Bethel and Harry Chandler, Donald Doster, Don Manning, Carl and Marie Parks, Relma Rogers, Sam Tucker (compiler - Rt. Box 236, Greenfield 38230).

CROSS CREEKS NWR—21 Dec.; 0200-1700; clear with AM fog; temp. 23-53° F; wind W 0-5 mph; 17 observers in 6-7 parties; 52 party hours (25 on foot, 24 by car, 3 by boat) plus 6.5 owling; 262 party miles (28 on foot, 232 by car, 2 by boat) plus 31 owling. Excellent details submitted for Virginia Rail and Least Sandpiper (both by JR). Also seen: 1 *Accipiter* spp. Excellent details also submitted for 1985 unusual species. 94 species; 26,413 individuals. Michael and Vicki Bierly, Donald Blunk, Gayle Boone, Kinian Cosner, Camille Crenshaw, Chris and Rowan DeBold, Jerry Drewry, Dennis Folczyk, Annie Heilman, Maxey Irwin, Carmen and Victor Janson, Lee Kramer, John Robinson (compiler - P.O. Box 215, Dover 37058), Ellen Walker.

BUFFALO RIVER—27 Dec.; 0350-1720; AM - cloudy, PM - clear; temp. 34-45° F; wind NNE 5-10 mph; 10 observers; 7 in 4 parties plus 3 at feeders; 40.75 party hours (17.5 on foot, 23.25 by car) plus 2 at feeders, 2.75 owling; 236.4 party miles (11.5 on foot, 224.9 by car) plus 36.9 owling. Excellent details submitted for Lincoln's Sparrow (EC, DAS). Seen count week - Great Blue Heron, Wild Turkey, Common Snipe. 70 species, 400,262 individuals. Fran and Robert Claudy, Edward Crouch, Chester and Dot McConnell, Royce Neidert, Ned Piper, Damien and Don Simbeck (compilers - Rt. 2 Box 3A, Loretto 38469), Wylie Willis.

CLARKSVILLE—27 Dec.; 0700-1530; cloudy; temp. 31-44° F; wind 0-10 mph; 24 ovservers; 10 in 5 parties plus 14 at feeders; party hours (on foot, by car) plus 8 at feeders; party miles (on foot, by car). No details were submitted for any unusual species. 63 species, individuals. Barbara Allen, David Chiles, Jerald and Juanita Harris, Bill Hudson (compiler - 619 Idlewood Dr., Clarksville 37043), Nancy Hughes, Ellen Hutchison, Dennis Jolezls, Therston Lee, Dr. and Mrs. W.G. Lyle, Linda Mattes, Bill Jr. and Gloria Milliken, Evelyn Nixon, Edwin Peck, Haskell Phillips, Louise Podell, Mary Ann Stephens, Jean Thomas, Margaret Vankosyk, Ellen Walker, Barbara Wilbur.

COLUMBIA—27 Dec.; 0330-1700; cloudy; temp. 33-43° F; wind NW 0-6 mph; 19 observers; 13 in 5 parties plus 6 at feeders; 48.5 party hours (23 on foot, 25.5. by car) plus 20 at feeders, 5 owling; 423 party miles (18 on foot, 405 by car) plus 52 owling. The Snow Geese were of the white form. Details of all unusual species included observer's name and location, but no description of the birds seen was submitted. 97 species, 1,016,948 individuals. William Fuqua, Daniel Jr. and Daniel Gray III, William Jernigan, Allyn Lay, Anne and Bedford Lochridge, Mary Lyles, George (compiler - 999 Sunnyside Dr., Columbia 38401) and Mark Mayfield, Allen and Dianne Pressnell, Charles Thomas. Names of feeder-watchers not submitted.

DUCK RIVER RESERVOIR—3 Jan; 0600-1900; partly cloudy; temp. 20-40° F; wind W 0-10 mph; 11 observers; 10 in 5 parties plus 1 at feeders; 32 party hours (19.5 on foot, 12.5 by car) plus 3 at feeders, 3.5 owling; 201 party miles (10 on foot, 191 by car) plus 21 owling. The Snow Goose was the the blue form. 63 species, 3636 individuals. Kenneth Anderson, Bill Jernigan, Allyn Lay, Anne and Bedford Lochridge, Cleo and George Mayfield, Mike Penrod, Allen (compiler - Rt. 6 Box 274G, Columbia 38401) and Dianne Pressnell. Name of feeder-watcher not submitted.

NASHVILLE—27 Dec.; 0600-1700; cloudy; temp. 37-43° F; wind NW 0-5 mph; 41 observers, 33 in 12 parties plus 8 at feeders; 102.5 party hours (48 on foot, 54.5 by car) plus 24 at feeders, 1.5 owling; 440 party miles (37 on foot, 403 by car) plus 3 owling. Excellent details submitted for Brewer's Black-

bird (PH). 78 species, 21,588 individuals. Jan Alexander, Linda Anderson, Connie Collopy, Kin Cosner, Bill Cowart, Annella Creech, Camille Crenshaw, Chris and Rowan DeBold, Jerry Drewry, Milbrey Dugger, Evelyn and John Ellis, Lucy, Bill and Margaret Finch, Mary Anne and Tom Guschke, Paul Hamel, Bob Hatcher, Pamilla Hopkins, Maxey Irwin, Lewis Jacobson, Deane McGurk, Marjorie and Oscar Patrick, Larry Raye, Richard Simmers, Ann Tarbell (compiler - 6033 Sherwood Drive, Nashville 32715), David Vogt, Kenneth Walkup, Miriam Weinstein, Betty Worden. Names of feeder-watchers not submitted.

HICKORY-PRIEST—3 Jan; 0500-1730; clear; temp. 21-42° F; wind NE 5-20 mph; 25 observers; 23 in 8-10 parties plus 2 at feeders; 68.5 party hours (44.75 on foot, 23.75 by car) plus 12 at feeders, 3 owling; 257.5 party miles (27.5 on foot, 230 by car) plus 10 owling. Excellent details were submitted for Lesser Yellowlegs (JD), 1 *Empidonax* spp. [photo] (DN), and House Wrens (PS/DV). Also seen 1 *Buteo* spp., 30 unid. blackbirds. 86 species, 11,988 individuals. Frances Abernathy, Jan Alexander, Linda Anderson, Chris and Rowan DeBold, Jerry Drewry, Henry Duffett, Evelyn and John Ellis, Katherine Goodpasture, Mary Ann Guschke, Carol Knauth, Lee Kramer, Margaret Mann, Rocky Milburn, Dick Newton, Betty Richards, Pat Stallings (compiler - 406 N. 17th St., Nashville 37206), Ann Tarbell, David Vogt, Miriam Weinstein, Betty Worden.

MURFREESBORO—27 Dec; 0700-1700; cloudy; temp. 35-45° F; wind 5 mph; 20 observers, 16 in 6 parties plus 4 at feeders; 29 party hours (0 on foot, 29 by car) plus 12 at feeders; 230 party miles (0 on foot, 29 by car). [no birding on foot? - DJS] 58 species, individuals. Russell Driver, C.E. Greever, Edith Hayes, Anne (compiler - 1018 Lawndale Dr., Murfreesboro 37130) and Bob Hettish, John Hooper, Richard and Wilma Hunter, David McCarrol, Pat and Vic Cauley, Gene and Ruth Odom, John Patten, Alberta Spence, Frances Vaughan, Terry Witt. No other names were submitted.

LEBANON—27 Dec; 0700-1630; cloudy; temp. 28-52° F; wind 3-7 mph; 9 observers in 3 parties; 15.5 party hours (1 on foot, 14.5 by car); 180 party miles (1 on foot, 179 by car). Good details submitted for Common Mergansers (FD, RP), Osprey (JR), Rough-legged Hawks (FD, RP), and Bewick's Wrens (FD, RP/EB, VB). 78 species, individuals. Earline and Vernon Berry, Fred Detlefsen, Mildred Gaston, Donald Jenkins, Ruth McMillan (compiler - Rt. 2 Box 141, Lascassas 37085), Kay Norris, Ray Pope, Jeff Reed.

HIGHLAND RIM—27 Dec; 0630-1730; AM - cloudy; PM - clear; temp. 30-40° F; wind light; 17 observers in 7 parties; 34.5 party hours (3 on foot, 31.5 by car); 365 party miles (3 on foot, 362 by car); Both eagles were adults. The Snow Goose was of the white form. A single scaup was reported as Greater, but identification was uncertain and no distinguishing details were seen (JB, LB, CP, HP). 67 species, 68,565 individuals. Carol Barr, John and Lois Brunner, Marjory Harper, Marguerite Hernandez, Ruth Luckado, Frances and Philip (compiler - Rt. 2 Box 173B, Hillsboro 37342) Medley, Cloe and Howell Peeples, Erma Rogers, Mary Shelton, Violet Wakefield, Lillie Willard, Wanda Winnett, Grady and Willa York.

PICKETT COUNTY—22 Dec; 0700-1600; clear; temp. 28-50° F; wind NE 5 mph; 2 observers in 1 party; 7.5 party hours (0.5 on foot, 7 by car); 28.5 party miles (0.5 on foot, 28 by car). Both eagles were immatures. Excellent details submitted for Osprey. 53 species, 1069 individuals. David and Robbie Hassler (compilers - Rt. 1 Box 164A, Byrdstown 37549).

NICKAJACK LAKE (NIC1)—3 Jan; 0300-1730; AM - clear, PM - partly cloudy; temp. 22-43° F; wind NNE 5 mph; 22 observers in 9 parties; 87 party hours (53 on foot, 34 by car) plus 12 owling; 478 party miles (37 on foot, 441 by car) plus 145 owling. All the eagles were adults. Excellent details submitted for Green-backed Heron (DJ), House Wren (JS), Palm Warbler (DJ, KJ, MD), and Lincoln's Sparrow (DJ). 97 species, 28,733 individuals. Katherine Boyles, Mike Davidson, Paul Harris, John Henderson, Caryl Hogsett, Jerry Ingles, Dan and Kathy Jacobson, Starr Klein, Johnny Parks, Kent Pennington, Chuck Robertson, Peter Robinson, Mark Rothberger, Robin Rudd, Gene Ryther, Cindy and Joe (compiler - 4128 Caine Lane, Chattanooga 37421) Stone, Carl Swafford, Dale Taylor, John Whitaker, Dan Williams.

NICKAJACK LAKE 1985 CBC (NIC2)—4 Jan 1986; 0300-1700; AM -cloudy, PM - mostly cloudy; temp. 36-51° F; wind SSE 0-15 mph; 32 observers in 7 parties; 70 party hours (26.5 on foot, 40 by car, 3.5 by boat) plus 7.5 owling; 324 party miles (27 on foot, 287 by car, 10 by boat) plus 110 owling. Five of the eagles were adults. Excellent details submitted for Northern Saw-whet Owl [calling] (ChH, DJ) and Palm Warbler (ChH, AS). Also reported 1 scaup spp., 1 falcon spp. Seen count week - Canvasback. 99 species, 19,006 individuals. Benton and Peggy Basham, Nelson Bennett, Katherine Boyles, Corey Davidson, Cary Hambleton, Chris Haney, Paul Harris, John Henderson, Ann Holland, Daniel and Kathy Jocobson, Al Jenkins, Starr Klein, Johnny Parks, Dave and Tom Patten, Kent Pennington, Tyler Prestwood, Chuck Robertson, Peter Robinson, Robin Rudd, Gene Ryther, Sara Sells, Amy, Cindy and Joe (compiler) Stone, Carl and Chris Swafford, Dale Taylor, Bruce Whilkey, John Whitaker.

CHATTANOOGA—20 Dec; 0400-2200; AM - partly cloudy, PM - clear; temp. 30-56° F; wind N 0-8 mph; 38 observers, 36 in 12 parties plus 2 at feeders; 110 party hours (79 on foot, 31 by car) plus 12 at feeders, 11 owling; 480 party miles (52 by foot, 428 by car) plus 87 owling. Excellent details submitted for Sandhill Crane (JP), Common Nighthawk (PH, DJ, PR) [excellent description], and Solitary Vireo (JHe, JW). Seen count week -Northern Harrier, Gray Catbird [fair description, identified primarily by voice.] 100 species, 18,444 individuals. Edith Bromley, Louise Cash, David Chaffit, Bob Crawford, Angela Davis, Kenneth and Lillian Dubke, Jack Freeman, Paul Harris, John Henderson, Ella and J.N. Howard, Daniel Jacobson, Albert Jenkins, Lenny Kafka, Ross Kindermann, Starr Klein, J.W. Knott, Sandy Kurtz, Johnnie Sue Lyons, Barbara and Michael McMahan, Johnnie Parks (compiler - 1610 E 17th St., Chattanooga 37404), David and Tom Patton, Judith and Wade Rawlins, Peter Robinson, Robin Rudd, Gene Ryther, Joe Stone, Craig, Keith, and Susan Watson, John Whitaker, Dan Williams.

HIWASSEE—1 Jan; 0400-1800; AM - cloudy with light rain, PM - partly cloudy; temp. 37-50° F; wind AM - NNE 0-6 mph, PM - E-NW 3-7 mph; 17 observers in 7 parties; 79 party hours (41 on foot, 32 by car, 2 by boat) plus 4 owling; 495 party miles (25 on foot, 408 by car, 10 by boat) plus 52 owling. One of the eagles was an adult. The Snow Goose was of the blue form. Excellent details submitted for Osprey (CW, KW, SW), Golden Eagle (DB, LD, JP) [third year bird], and Sanderling (LD). Also reported: 17,500 unid. blackbirds. Seen count week - Green-backed Heron (KD,LD), Canvasback, Peregrine Falcon (KD, LD). 99 species, 34,113 individuals. Laurie and Mark Armstrong, Frank Bills, Delbert Blum, Edith Bromley, Kenton Dickerson,

Kenneth and Lillian Dubke, Tony Koella, Brian Locke, Johnny Parks (compiler), Robin Rudd, Boyd Sharp, Craig, Keith, and Susan Watson.

NORRIS—27 Dec; 0630-1815; AM - fog then clear, PM - cloudy; temp. 29-40° F; wind AM - NE 5 mph; 7 observers, 3 in 2 parties plus 4 at feeders; 14 party hours (9.5 on foot, 4.5 by car) plus 3 at feeders, 1.25 owling; 111 party miles (6 on foot, 105 by car) plus 4 owling. Seen count week - Common Goldeneye, American Coot, Eastern Phoebe. 60 species, 2310 individuals. David Hankins, David Highbaugh, Charles Nicholson (compiler - Box 402, Norris 37828). Names of feeder-watchers not submitted.

KNOXVILLE—20 Dec; 0530-1830; clear; temp. 24-54° F; wind N 0-3 mph; 28 observers, 27 in 14 parties plus 1 at feeders; 97 party hours (64 on foot, 33 by car) plus 3 at feeders, 6 owling; 475 party miles (50 on foot, 380 by car) plus 45 owling. Details of Green-backed Heron (JH, JO, BS) lacked a description of the bird seen. 79 species, 13,275 individuals. Jane Beintema, Richard Clark, Robert Collier, William Cowart, Marcia Davis, Barbara Fleming, Louise Fuller, Brice Gilmer, David Hankins, Paul Hartigan, Tom Howe, Joseph Howell, Hal Hubbs, Burt Jones, Tony Koella, Bill Martin, Bettie and James Mason, Sally Mirick, Charles Nicholson, Holly Overton, J.B. Owen, Paul Pardue, Don Powers, Boyd Sharp, James Tanner (compiler - Rt. 28 Box 155, Knoxville 37920).

GREAT SMOKY MOUNTAINS NATIONAL PARK—4 Jan; 0545-1700; mostly cloudy; temp. 20-45° F; wind var. 1-7 mph; 2-3 in. snow at higher elevations; 29 observers in 13 parties; 97 party hours (65.25 on foot, 31.75 by car); 321 party miles (59 on foot, 262 by car). Also reported: 1 *Accipiter* spp. The Chickadees were a mixture of Black-capped and Carolina. 64 species, 4510 individuals. Betty Adams, Jane Beintema, Betty Reid and Jim Campbell, Mario Castro, Howard Chitwood, Richard Clark, Don DeFoe (compiler - Great Smoky Mountains NP, Gatlinburg 37738), Louise Fuller, Ellie Gilmore, Paul Hartigan, David Highbaugh, Mary Jo Hoover, J.C. Howell, Hal Hubbs, Tony Koella, Henry Lix, Barbara and William Martin, Charles Nicholson, Brian and Dee Ostby, Holly Overton, J.B. Owen, Truett Patterson, Brian Rafferty, Laura Rogers, Boyd Sharp, James Tanner.

GREENEVILLE—29 Dec; 0900-1830; cloudy with fog; temp. 24-38° F; wind PM 5-8 mph; 28 [includes feeder-watchers] observers in 6 parties; 27.5 party hours (11.5 on foot, 13.5 by car, 2.5 by canoe) plus 22 at feeders, 3 owling. 218 party miles (8 on foot, 210 by car, by canoe) plus 35 owling. Poor details submitted for Green-backed Heron. 58 species, individuals. Phine Britton, Justin and Violet Carlos, Cynthia and Herbert Cragin, Marjorie Earnest, King and Margaret Gaut, Juanita Heckert, Don and Jim Holt, Dan, Richard, Terry, and Willie Ruth Nevius, Doug Ratledge, Helen Reed, Jo Ann Routledge (compiler - 1218 Woodhaven Lane, Greeneville 37743), Andrew, Helen, and Nathan Spees, Jean Weaver, Virginia Williams.

KINGSPORT—3 Jan; 0800-1800; AM - partly cloudy, PM - clear; temp. 28-41° F; wind SW 0-5 mph; 24 observers, 21 in 7 parties plus 3 at feeders; 50.25 party hours (20.5 on foot, 29.75 by car) plus 20 at feeders, 1.5 owling; 301.6 party miles (21.6 on foot, 280 by car) plus 28 owling. Excellent details submitted for Spotted Sandpiper (WH, TP, TW) and Solitary Vireo (RK). No details submitted for Osprey. 69 species, individuals. Frank Altom, Connie, Reba, and Robert Baker, Donny Blakely, Chris Brown, Sandra Driskell, Glen Eller, George Ford, David and Jim Gilland, Wynn Herbert, Sallie Kennedy, Rick Knight, Betsy McConnell, Peter Morison, Tom Pridgen,

Layrie Sampson, E.E. Scott, Arthur Smith (compiler), Tim Whitley, Frank Williams. Other names not submitted.

BRISTOL—27 Dec; 0400-1630; AM - partly cloudy, PM - clear; temp. 24-44° F; wind calm; 5 observers in 3 parties; 23 party hours (8 on foot, 15 by car) plus 3 owling; 216 party miles (6 on foot, 210 by car) plus 35 owling. Fair details submitted for Northern Goshawk. 62 species, 3800 individuals. Wallace Coffey, Glen Eller, Bert and Loraine Hale, Richard Lewis (compiler - Rt. 3 Box 590, Bristol 37620).

ELIZABETHTON—20 Dec; 0430-1800; AM - clear, PM - partly cloudy; temp. 24-53° F; wind 0.5 mph; 18 observers in 6 parties; 56.5 party hours (27 on foot, 29.5 by car) plus 4 owling; 311.5 party miles (12.5 on foot, 299 by car) plus 3.5 owling, Excellent details submitted for Yellow-crowned Night-Heron (SG, RL, GS). 74 species, 6291 individuals. Fred Alson, Brian and Marty Cross, Martha Dillenbeck, Glen Eller (compiler - Rt. 3 Grandview Terrace, Elizabethton 37643), Harry Farthing, Sally Gooden, Dick and Mildred Hegler, Brenda Hull, Richard Lewis, Ed Schell, Arthur Smith, Glenn Swofford, Cathi Sullins, Gary Wallace, Frank Ward.

ROAN MOUNTAIN—23 Dec; 0600-1615; cloudy with PM rain, temp. 22-42° F; wind SW 0-5 mph; 5 observers in 3 parties; 20 party hours (8 on foot, 12 by car) plus 1.5 owling; 121 party mile (4 on foot, 117 by car) plus 6 owling. Fair details submitted for Northern Goshawk (FA). 45 species, 1163 individuals. Fred Alsop, Glen Eller (compiler), Rick Knight, Glen Swofford, Frank Ward.

IN MEMORIUM: WENDELL LAWRENCE WHITTEMORE

Ben B. Coffey, Jr.

Dr. Whittemore, a prominent and much-loved orthopedic surgeon in Memphis, was a graduate of Rhodes (Southwestern) College and the University of Tennessee School of Medicine. In World War II he was a Navy doctor for 4 years, serving 2½ years in the South Pacific, and rose to the rank of Lieutenant-Commander. He completed orthopedic surgery training at 2 Louisville, Kentucky hospitals, returned to Memphis in 1950, and was a founder of the Memphis Orthopedic Group. He practiced over 35 years at the Methodist Hospital where he was a president of the staff and an associate professor at the University of Tennessee medical school. On 23 June, 1947, he married Annabelle Paine and is survived by her, 3 daughters, and a son. "Whit" was a former vestry member at St. Mary's Episcopal Cathedral.

Born 31 March, 1916, in Provo, Utah, Wendell moved to Memphis in 1928. As a Boy Scout here, he earned his Eagle badge and became one of those Eagles who greatly assisted me in banding Chimney Swifts and in other field work. He joined the Memphis Chapter of the Tennessee Ornithological Society in 1935 and the Wilson Ornithological Society in 1971. He was also a member of the Tennessee Academy of Science at one time. In the Journal of the Tennessee Academy of Science was published his "Summer birds of the Reelfoot Lake" (JTAS 12:114-128, 1937), which was based on extensive fieldwork during the summer of 1936, when Wendell worked there as a creel clerk.

While stationed at Tulagi in the central Solomon Islands during World War II, he took advantage of opportunities to observe the birds there, naming them for his friends, since there was no handbook in print. Professional seminars, including some overseas, gave him limited chances at new life birds. Wendell accompanied Lula and me on 6 of our trips into Chiapas and Yucatan, Mexico. He was also on the 4 annual 9-day trips made there by our group from the Memphis Chapter. His voluntary and timely professional services eased the path of the large Hardy-Coffey birding tour to Ecuador and the Galapagos in 1977.

His last trip was to the 1986 joint Tennessee and Wilson Ornithological Societies' meeting in the Smokies. His passing on 6 May, 1986, was a great personal loss to many of us in the Memphis Chapter and in our community at large.

672 N. Belvedere, Memphis, TN 38107.

RECORDS OF AUTUMN HAWK MIGRATIONS

Linda J. Fowler, who has been the T.O.S. compiler of autumn hawk flights, preserved copies of the original reports and of notes and meteorological data for the years 1980 through 1985. They have now been place in the Special Collections of the University of Tennessee Library, Knoxville, where they will be preserved and made available for study.

JAMES T. TANNER, Curator

MINUTES OF THE 1986 FALL MEETING AND SYMPOSIUM

The 1986 Fall Meeting and Sumposium, consisting of a Board of Directors meeting, symposium, and field trips, was held at the Quality Inn in Lebanon, Tennessee, 17-19 October 1986. Ninety-eight persons registered for the meeting.

BOARD OF DIRECTORS MEETING

The Board of Directors meeting was clled to order by President James Ferguson on 18 October. The reading of the minutes of the April 1986 annual meeting were dispensed with and the minutes were approved as printed.

REPORT OF OFFICERS

VICE PRESIDENT for East Tennessee Lil Dubke reported on the activities of the Greeneville, Knoxville, Lee Herndon and Chattanooga Chapters in her district. VICE PRESIDENT for Middle Tennessee Tom Guschke related news from the Red River Chapter. VICE PRESIDENT for West Tennessee Dollyann Daily invited all to the 1987 Spring Meeting in Memphis, 1-3 May. There were no reports from the SECRETARY or the DIRECTORS-AT-LARGE.

TREASURER George Payne reported that from 10 April 1986 to 16 October 1986, income was $1,880.30, expenses were $3,449.38, and capital reserve was $33,659.46. A detailed report was submitted.

CURATOR James Tanner reported that the notebook containing records of Tennessee birds compiled by Henry Parmer has been placed for permanent storage in the Special Collections of the University of Tennessee Knoxville Library.

EDITOR of *The Migrant* Charles Nicholson reported that three issues have been mailed since the last meeting: December 1985, March 1986 and June 1986. He solicited manuscripts for forthcoming issues. The Editor announced staff changes, including Richard Knight becoming Eastern Ridge and Valley Region Season Report compiler. He thanked the Dubkes for their many years of service to the Society in compiling that report. He will be selecting a new State Count Compiler to replace Richard Knight at that position. Nicholson then announced that he would be resigning as Editor of *The Migrant* in May 1988 and hoped that a replacement would be chosen in May 1987 to make the transition smooth. President Ferguson expressed appreciation for the Editor's efforts in getting *The Migrant* up to date, and he announced that he has asked Dr. James T. Tanner to head a committee to propose a new Editor for *The Migrant* by the 1987 Annual Meeting.

REPORTS OF COMMITTEES

FINANCE Chairperson Richard Taylor was absent but President Ferguson reported that a study is under way for the purpose of increasing returns of the Endowment Fund investments.

CONSERVATION/EDUCATION Chairperson Kenneth Dubke reported briefly on committee projects and introduced a written report from Ann Tarbell of the Nashville Chapter recommending that the earlier proposal for a reward fund to help protect Bald Eagles be dropped. Dubke reported that on 13-14 November 1986 the Tennessee Wildlife Resources

Commission will meet in Chattanooga where they will consider the status of endangered and threatened species. He asked for recommendations to present there.

CERTIFICATION Chairperson Charles Nicholson announced a meeting of that committee following the Board of Directors meeting, and he reported that Dianne Bean will be the new committee member from West Tennessee to replace David Pitts, who resigned.

BREEDING BIRD ATLAS Chairperson Paul Hamel reported that about $3,950 worth of contributions in the form of postage, printing, telephone, etc. have been made by the Tennessee Valley Authority, Tennessee Wildlife Resources Agency (TWRA), and Tennessee Department of Conservation. Regional Coordinators have had about $300 to $400 out-of-pocket expenses, and TOS has made a direct expenditure of $80. He presented a budget for the 1987 season.

EDITOR of *The Tennessee Warbler* William Bean was absent and sent no report.

PATCHES AND DECALS - President-Elect Robbie Hassler asked for a volunteer to handle this assignment and suggested that a new design be developed.

OLD BUSINESS

Robert M. Hatcher, TWRA Coordinator of Nongame and Endangered Species, reported on communications with Monsanto Corporation during which TWRA made recommendations for preserving as much of the Monsanto pond area as possible. He cited the help received from Stephen Stedman and others in this project. The President expressed appreciation for all the efforts as a good follow-up on the Board's resolution of April 1986.

Kenneth Dubke moved that TOS drop the idea of contributing to a reward fund to protect Bald Eagles. The motion was seconded and passed.

NEW BUSINESS

Foray Director Paul Hamel proposed several sites from which he asked the Board to make a choice for the 1987 Foray. Following discussion he moved that the Foray be held in Henry County with Paris Landing State Park as headquarters. In case accomodations are not available there, second choice would be Madison/Henderson Counties with headquarters at Natchez Trace State Park. The motion seconded and passed.

Lil Dubke proposed that brochures be printed to be used to promote TOS. The President appointed Dubke to work on this committee with others to be named.

President Ferguson recognized a new committee, the Membership Committee, made up of the 3 vice presidents. Vice President Daily reported that there are 110 new members for 1986 and asked the newsletter editor to publish names of all new members.

Paul Hamel moved the adoption of a budget for the Atlas Committee for 1987/88 and that TOS appropriate $530 to defray expenses of Regional Coordinators on a reimbursement basis, with money not spent to be carried over. This motion was seconded and passed.

ANNOUNCEMENTS

President Ferguson announced that he has asked Nelle Moore to serve as Chairperson of a committee to review and update the TOS Constitution.

Committee members are Robbie Hassler, Fred Carney, Lil Dubke and Thomas Guschke. Ferguson asked for recommendations to be voted on at the 1987 Annual Meeting.

James Tanner solicited ideas for people who might be considered for Editor of *The Migrant*, and asked members to write him with suggestions. Other membes of this search committee are to be appointed.

George Payne, Memphis Chapter President, reiterated the invitation to come to Memphis 1-3 May 1987 for the first Annual Meeting ever held there and gave further details of meeting plans.

President Ferguson distributed to chapter presidents a list of all current committee members and their terms of office.

Paul Hamel read a request for information for the Western Hemisphere Reserve Network for Shorebird Conservation. This network identifies sites critical for shorebird migration. TWRA has proposed Pace Point as a unit of the program, and Hamel suggested Island 13 for inclusion. He asked for bird records from Island 13 to aid him in preparing a nomination for the site.

Audrey Hoff, new Autumn Hawk Count Compiler, asked that count information be turned in to her by 30 November. Anyone wishing more information or wishing to start a hawk watch is requested to get in touch with her.

Robert Hatcher thanked those who participated in the Conservation /Education project in which chapters placed and monitored bluebird boxes at highway rest areas. He asked for project reports and any additional information.

President Ferguson then thanked Ruth McMillan and the entire John W. Sellars Chapter for arranging and hosting the meeting. He also thanked Stephen J. Stedman, Director of the Fall Symposium, and all the Symposium speakers.

CAROLYN BULLOCK, Secretary.

SYMPOSIUM PROCEEDINGS

The paper sessions of the 1986 Fall Symposium were arranged by Stephen J. Stedman. Abstracts of the papers presented at the Symposium are offered below.

SHOREBIRDS OF THE GALLATIN AREA, by Dot T. and J. Paul Crawford, Nashville Chapter, TOS. Shorebirds have been monitored for 16 years in the Gallatin area, including nearly 1000 trips to TVA's Gallatin Steam Plant, 480 trips to Lewis Pond, and 270 trips to Green's Pond. During this period, changes in the habitat used by the shorebirds at the steam plant were analyzed. Data for 34 species of shorebirds were recorded during the study period. Extreme dates of occurrence for spring and fall migration and maximum numbers encountered were summarized for most of these species.

BIRD CASUALTIES ON THE MTSU CAMPUS, by Patrick J. Doyle, Biology Department, Middle Tennessee State University. Fall surveys of bird kills at the MTSU Murphy Center were conducted in 1983, 1984, and 1985. Birds collected were identified, tagged, and frozen for future reference. Some of the specimens were mounted and placed in the Biology Department Museum. The surveys have provided information on fall migration patterns for 34 species of passerines.

AN OVERVIEW OF THE COASTAL PLAIN PROJECT, 1985-86, by Robert P. Ford, Department of Conservation. The Coastal Plain Project is a study conducted by the Tennessee Department of Conservation and the U.S. Army Corps of Engineers. It is a two-year study (1985-87) of 60 forested wetland sites in west Tennessee. When the analysis is completed, it will detail wetland flora and fauna in a wide range of successional stages. Abundance, diversity, and habitat preference of breeding season and winter birds are key factors. The information obtained will assist the state in preserving critical community types in west Tennessee.

THE 1986 TOS BREEDING BIRD FORAY TO OVERTON COUNTY, by Paul B. Hamel, Department of Conservation. The 1986 Breeding Bird Foray was held on Memorial Day weekend, 23-26 May, and was headquartered at Standing Stone State Rustic Park. A hardy group of 25 observers participated, despite daily rain that hampered some of the field activities. Organized into parties and using the techniques of the Tennessee Breeding Bird Atlas Project, observers visited all of the priority blocks in Overton County, as well as two in Clay and one in Putnam County. In this way, parts of 29 different blocks were covered. For the priority blocks, an intensive day or two of fieldwork were all that were required to register 60 or more species. This is encouraging for future atlas work. A total of 96 species were recorded, 68 as positive breeders. In order of decreasing abundance, the most frequently encountered species were Red-eyed Vireo, Indigo Bunting, Eastern Phoebe, American Crow, Common Yellowthroat, Eastern Wood-Pewee, American Robin, Yellow-breasted Chat, Northern Cardinal, and Eastern Meadowlark, each in at least 19 blocks. We thank each of the observers who participated in this enjoyable weekend and are grateful to Pam Trolinger for help in preparing this manuscript.

THE TENNESSEE BREEDING BIRD ATLAS PROJECT: FIRST YEAR RESULTS, by Charles P. Nicholson, Tennessee Valley Authority, Paul B. Hamel, and the Atlas Regional Coordinators. Preliminary 1986 results show that some level of atlas coverage was attained for at least 376 blocks, 36% of which were #5 priority blocks. Miniroutes were censused in fewer than half the #5 blocks, and many blocks received only incidental coverage. Fewer than one third of the blocks worked appear to have been completed. Approximately one half of the 11,000+ species status records were from #5 blocks. The intensity of coverage varied between regions and was lowest in west Tennessee. Computer-generated maps showing the distribution of atlasing effort, and the atlas results for the Indigo Bunting (*Passerina cyanea*) were displayed. Plans to improve project coordination were discussed.

THE BREEDING BIRD ATLAS AFTER THE FIRST YEAR: EVALUATING PROGRESS AND MAINTAINING MOMENTUM, by Charles R. Smith, Cornell Laboratory of Ornithology. The publication of *The Atlas of Breeding Birds in Britain and Ireland* by the British Trust for Ornithology in 1976, began a new era in bird study. Breeding bird atlas projects have swept the world. North America is no exception. Currently the Tennessee Breeding Bird Atlas Project is representative of similar projects now in various stages of completion in at least seven Canadian provinces and thirty-two states. More volunteer observers are involved in atlas projects in North America than in any other organized birding activity, with the possible exception of Christmas Bird Counts, sponsored by the National Audubon Society.

The concept of a breeding bird atlas is elegant in its simplicity. It is not necessary to find active nests so long as observers learn to interpret and pay close attention to the behaviors of the birds they watch. Indeed, an important by-product of atlas studies is a heightened awareness and understanding of bird behavior. At the same time, it is important to remember that the success of any atlas is critically dependent upon volunteer enthusiasm and participation throughout the course of the project. For that reason, annual evaluations of the progress, and the setting of clear objectives for each successive field season are essential components of atlas project management. In New York State, for example, 3,000 volunteer observers contributed over 300,000 hours of time during the six field seasons of that atlas project. The cost of the time those volunteers provided is in the neighborhood of $2,000,000, a nontrivial amount if state agencies choose to consider the value of in-kind services provided by volunteer observers.

The widespread availability of microcomputers can facilitate annual evaluations of atlas progress, summarizing information in ways that were nearly impossible before 1982. Projects that are fully computer-based, like the Tennessee Breeding Bird Atlas, have a clear advantage in their potential to provide timely, accurate, and comprehensive annual summaries of atlas information. In the period between the end of one field season and the beginning of another, atlas project managers should review progress in coverage on a block-by-block basis. Careful attention should be paid to assure that a consistent effort is made each season to survey each block adequately for rare species and for cryptic species such as marsh inhabitants and nocturnal or crepuscular species. If not accomplished during the first field season, a concentrated effort should be made during the second field season to determine the time required from observers to survey representative blocks adequately. The veracity of questionable observatons or observations of very rare species should be ascertained during or at the end of each field season, rather than waiting until the end of an atlas project.

As we learn more about the dynamics of bird populations, it is becoming increasingly clear that some method is needed to incorporate estimates of relative abundance into breeding bird atlas projects. Tennessee, like some other states (e.g., Maryland), is using a system of miniroutes, shorter versions of U.S. Fish and Wildlife Service Breeding Bird Survey (BBS) routes, to survey species. Coverage of miniroutes as well as regular BBS routes will provide valuable information about relative abundances of bird species concurrent with atlas distributional information. Such abundance information could be useful in achieving a more refined interpretation of the distributional patterns for any species which tends to be more widespread geographically during periods of high relative abundance.

It is important to remember that a breeding bird atlas is only a means to many possible ends. The value of atlas information is not limited to the publication of a book of maps and natural history information about the breeding birds of a state or province. Though the development of applications for atlas information is still in its earliest stages, it is already clear that a number of correlation studies of atlas information with other kinds of geographically-based information are possible. For example, it might be useful to correlate the distribution of many species of birds with land-use patterns as determined from aerial or satellite photography available for atlased regions. And Dutch ornithologists have demonstrated that atlas information can be used to define and delineate biogeographic regions for the breeding birds of the Netherlands.

During the course of a breeding bird atlas, it is important to begin planning for how atlas information can be applied to achieve a better understanding of the distribution and management needs of birds once the field studies are completed. Also, it is important not to forget that the first breeding bird atlas for any region is only the beginning. The potential value of a breeding bird atlas only can be realized fully when the project is repeated at some future date. It is only after an atlas is repeated that meaningful comparisons of changes in bird distributions over time can be accomplished.

THE WINTER ROADSIDE RAPTOR SURVEY: FIRST YEAR RESULTS, by Stephen J. Stedman, Symposium Director, TOS. A Winter Roadside Raptor Survey was initiated during the winter of 1985-86. Modeled on raptor surveys conducted in the 1940's by Craighead and Craighead in the upper midwest, this survey was limited to middle Tennessee during its first season, when 18 surveys were conducted by 23 observers, who covered 2288 km of roads in 12 counties. Data for 10 diurnal raptors and the Loggerhead Shrike (*Lanius ludovicianus*) were collected and analyzed. Results of the surveys showed that the rank order of abundance for these species closely paralleled their rank order of abundance on middle Tennessee Christmas Bird Counts, suggesting that these surveys are a valid measurement of winter raptor populations. In addition, the surveys revealed that the wintering American Kestrel (*Falco sparverius*) population in middle Tennessee consisted of 57% males and 43% females. The wintering population or Red-tailed Hawks (*Buteo jamaicensis*) consisted of 87% adults and 13% immatures. The survey analysis suggested that winter mortality rates for some species could be established in the future.

MINUTES OF DECEMBER 1986 BOARD OF DIRECTORS SPECIAL CALLED MEETING

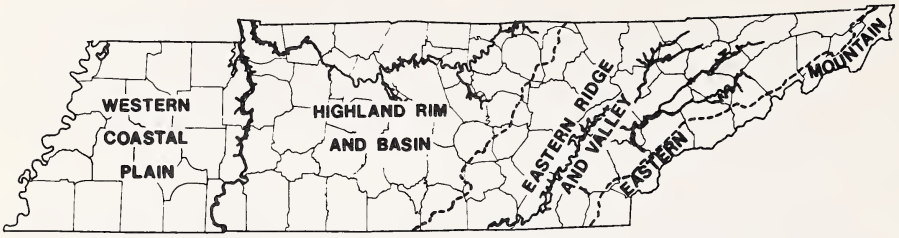
A special called meeting of the Board of Directors was held 10 December 1986 in Nashville, Tennessee. Vice President for Middle Tennessee Tom Guschke served as Chairman pro-tem in the absence of President James Ferguson and Vice President for West Tennessee Dollyann Daily. Eight directors were present, and enough others were represented by proxies to have a quorum.

After calling the meeting to order, Guschke explained the purpose of the meeting, as specified by Article III, Section 5 of the TOS Constitution, relating to the filling of vacancies in any office. President-Elect Robbie Hassler has submitted her resignation from that position, requiring the Board to fill that vacancy. Guschke reviewed the requirements of Article III, Section 4, which specified the next president be from the Middle Tennessee region. The Nominating Committee nominated Stephen Stedman for the office of President-Elect. A motion was passed accepting the report of the committee. No nominations were made from the floor, and after discussion was opened, the question was called. The vote was taken to elect Stedman as President-Elect, with 26 voting yes, one voting no, and one abstaining.

There being no further business of the special called meeting, the meeting was adjourned.

TOM GUSCHKE, Vice President for Middle Tennessee.

THE SEASON



FALL MIGRATION: 1 AUGUST — 30 NOVEMBER 1986

Warmer than average temperatures prevailed throughout this fall, and the first heavy frosts did not occur until early November. Heavier than average rainfall late in the season helped the state to recover from the drought. Rainfall totals for the year were still below average at the end of the season. As during the last 2 fall seasons, there were few strong cold fronts with associated waves of migrants. Judging from the reports here, the passerine migration was rather dull. The state's 2 "Operation Recovery" style banding stations in east Tennessee both reported below-average capture rates. The amount of space devoted to the non-passerines in the following reports is over twice that devoted to the passerines, far out of proportion to the number of species in each group. Are birders devoting more effort to the easily observable hawks, waterfowl, and shorebirds than to the harder to find passerines?

There were many notable observations. Several species of shorebirds occurred in very high numbers and much later that normal in the Memphis area. The first Ross' Goose in the state was reported from Cross Creeks refuge. About 5000 Sandhill Cranes were observed, which, although there was undoubtedly some duplication in these reports, accounts for over half of the known population of the eastern migratory subspecies. The population apparently passed somewhat west of its normal route, as there were more reports than normal from middle Tennessee, and fewer reports from the Knoxville area and the northern end of the Cumberlands. High numbers of Common Loons and Double-crested Cormorants were reported from east and middle Tennessee; the 400 loons and 170 cormorants on Watauga Lake on 12 November must have been a truly impressive sight. Red-breasted Nuthatches were reported from east and middle Tennessee in late September and early October. Pine Siskins were present throughout the state by early November, and a few Evening Grosbeaks were reported late in the period.

A new compiler for the Eastern Ridge and Valley Region debuts in this issue. I welcome Rick Knight to this position, and wish him luck. Rick takes over from Ken and Lil Dubke, who compiled this report for 10 years. On behalf of the TOS, I thank Ken and Lil for a job well done. -- CHARLES P. NICHOLSON.

Abbreviations used in these reports include: b - banded; EOP - end of period; ers - earliest report of season; lrs - latest report of season; max -maximum number reported in 1 county in 1 day during season; m.ob. - many observers; WMA - Wildlife Management Area.

WESTERN COASTAL PLAIN REGION - Very dry conditions and warm temperatures characterized this season. Fall migration of uncommon species and warbler species seemed to be confined to a few days of intense movement. Reports of a Surf Scoter, late migrating Broad-winged Hawks, a high number of Least Sandpipers and greater than normal concentration of other shorebirds. A Red-necked Phalarope, Brewster's and Connecticut Warblers, Lark and Sharp-tailed Sparrows encouraged more observers to go into the field. Winter visitors were not observed in any great number and did not arrive unusually early or late. Sparrows seemed low in numbers, while wrens were numerous. Blue-winged, Golden-winged, and Wilson's Warblers were more numerous than in past seasons.

Loon-Falcon: Common Loon: 2, 22 Aug (1) PSL (MHI, ECC, CKC, JCR); 10 Oct (34) PAP (MHI); 8 Nov (61) PLS (JCR); 10 Nov (2), 15 Nov (1) ESL (DAD, JRW). Horned Grebe: 19 Oct (3) PAP (MHI); 22 Nov (42) PLS (JCR). White Pelican: 7 Oct (20) MEM (BBC); 13 Oct (23) WNR (*fide* USFWS personnel); 26 Oct (37) SFP (JBG); 2 Nov (40) Horseshoe Lake, ARK (BBC, LCC). Double-crested Cormorant: 19 Oct (42) BSU, PAP (MHI); 10 Nov (4) ESL (DAD, JRW). ANHINGA: 10 Nov (46) ESL (DAD, JRW), latest date and highest number recorded for area. Great Blue Heron: 6 Sep (15) Island 21, DYC, 17-27 Sep (15-57) I13 (WGC). Great Egret: 16 Aug (58) 1 mi N of TN 103, DYC (WGC); 8 Nov (1) PAP, BRF (JCR). Snowy Egret: 1 Aug (35) levee and TN 103, DYC (WGC). Little Blue Heron: 1 Aug (3 ad), 11 Aug (3 imm) I13 (WGC). Cattle Egret: 7 Nov (1) Millfield, DYC (WGC), lrs. American Wigeon: 6 Sep (2) PAP (WAS). SURF SCOTER: 8-9 Nov (1-2) PLS (JCR), second record for region and PLS. Comon Goldeneye: 8 Nov (2) PLS (JCR). Hooded Merganser: 15 Nov (92) BSU (JCR). Turkey Vulture: 30 Aug (50+) BSU (AHH, NRH). Osprey: 21 Sep (1) ESL (MTOS); 4 Nov (1) PEF (JRW). Mississippi Kite: last report 6 Sep (4) Heloise, DYC (WGC). Bald Eagle: 23 Nov (1) Busseltown Unit, TNWR, DTC (CHB, DPB, DAD, MGW). Sharp-shinned Hawk: 1 Sep (1) I13 (SJS *et al.*); 29 Sep (1) MEM (JRW); 1 Nov (2) ESL (DAD, JRW); 2, 23 Nov (10) PEF (VBR, JRW). Cooper's Hawk: 1 Sep (1) I13 (SJS *et al.*); 7 Sep (1) PEF (NMS, MGW); 8 Sep (1) I13 (JRW, JBG, RTC); 22 Oct (1) MEM (CHB, SCF, JRW); 17 Nov (1) MEM (DAD). Red-shouldered Hawk: 30 Aug/1 Sep (1) I13 (MTOS/SJS *et al.*); 1 Sep (1) east SBC (CHB, WJB, DPB, VBR, GRP, MGW); 8, 10 Sep (1) PEF (CHB, SCF, NMS, JRW, MGW). Broad-winged Hawk: 27 Sep (22) SE of Willistown, Fayette Co. (BBC, LCC); 6 Oct (122) MEM (Jo L. Levy), (34) MEM (CHB), (50) MEM (SCF); 8 Nov (1) PEF (RTC); 10 Nov (46) ESL (DAD, JRW). Rough-legged Hawk: 8-10 Nov (2) PEF (RTC); 27 Nov (1) Lake Isom NWR, Lake Co. (Van Harris). Peregrine Falcon: 8 Sep (1) I13 (JRW, JBG, RTC); 21 Sep (1) ESL (MTOS); 1 Nov (1) ESL (DAD, JRW). PRAIRIE FALCON: 6 Sep (1) Mound City TN/ARK line (RTC).

Rail-Avocet; Virginia Rail: 5 Oct (1) MEM (Mrs. James B. Kisner). Killdeer: 9 Aug (30), 11 Aug (55) I13 (WGC); to 15 Nov (4-350) ESL (JRW). Black-bellied Plover: 11 Aug (1) PAP (AHH, NRH); 16 Aug - 1 Sep (1-3) I13 (JCR, ECC, CKC, WGC, MTOS, SJS *et al.*); 13 Sep - 2 Oct (1) ESL (JRW, DAD, MGW, CHB, MTOS). Lesser Golden-Plover: 24 Aug (1), 28 Sep (2) ESL (BBC, LCC). Semipalmated Plover: 2 Aug - 26 Sep (2-5) ESL (JRW, CHB, DAD, MGW); 15 Aug - 20 Sep (4-40) I13 (WGC, JCR, JRW); 31 Aug (11), 17 Sep (5) PAP (AHH). Piping Plover: 11 Aug (1) I13 (WGC); 30 Aug (1) I13 (MTOS); 30 Aug (1) PAP (NRH). Avocet: 15 Sep (1) I13 (WGC).

Yellowlegs - Pharlarope: Lesser Yellowlegs: 2 Aug - 2 Oct (1-48) ESL (JRW, CHB, DAD, MGW); 15 Nov (1) ESL (JRW). Solitary Sandpiper: 2 Aug (22), 9 Aug (9) ESL (JRW); 17 Aug (3) I13 (MHI, CKC, ECC); 17 Aug - 26 Sep (1-7, sporadic) ESL (JRW, CHB, DAD, MGW); 22 Nov (1) ESL (JRW), late. Willet: 17 Aug, 5, 12 Sep (1) I13 (ECC, MHI, WGC). Spotted Sandpiper: 2 Aug (11) ESL (JRW); 17-23 Aug (2-6) ESL (JRW, CHB, DAD, MGW). Upland Sandpiper: 17 Aug (2) I13 (CKC); 30 Aug (5) 1 mi S of Alamo, Crockett Co. (DFV). Sanderling: 4 Aug - 24 Sep (1-13), max on 24 Sep, I13 (JCR, WGC, CKC, ECC, MHI); 5 Sep (3), 17 Sep (4) PAP (WAS, AHH);23 Sep - 13 Oct (1-2) ESL (JRW, CHB, MGW). Ruddy Turnstone: 2 Aug (5), 10 Aug (6) I13 (WGC, JCR); 6 Sep (2) PAP (WAS); 7-24 Sep (2-11), max on 7-8 Sep, I13, (RTC, JGB, JRW, TJW, WGC). Western Sandpiper: 2 Aug (18) ESL (JRW); 17 Aug - 8 Sep (8-17) I13 (MHI, ECC, CKC, MTOS, SJS *et al.*); 13 Sep - 2 Oct (2-8) ESL (JRW, CHB, DAD, MGW); 1 Nov (2), 15 Nov (1) ESL (DAD, JRW), late. Baird's Sandpiper: 9 Aug (1) PAP (MHI, ECC, CKC); 9 Aug (1) ESL (JRW); 30 Aug -24 Sep (1-8) I13 (MTOS, WGC); 13 Sep (4) PAP (TJW); 21 Sep - 13 Oct (1-5) ESL (MTOS, JRW, CHB, MGW); 15 Nov (1) ESL (JRW), late. Least Sandpiper: from 78-685 during Aug and Sep at ESL (JRW *et al.*); then higher numbers - 2 Oct (1064), 25 Oct **(2600),** 26 Oct (1500), 30 Oct (452), 1 Nov (850), 10 Nov (1100), 15 Nov (1400) ESL (JRW, CHB, MGW, DAD). White-rumped Sandpiper: 26 Oct (4), 1 Nov (2) ESL (JRW, DAD, MGW). Pectoral Sandpiper: 8 Aug (50), 11 Aug (35) I13 (WGC); 21 Aug (115) Heloise, DYC (WGC); during Aug and Sep (64-320) ESL (JRW *et al.*); 21 Nov (1) ESL (JRW) and (1) BSU (JCR), latest area records by 15 days. Dunlin: 19 Oct (5) PAP (MHI); 26 Oct (130) ESL (DAD, JRW, MGW); 27 Oct (3) BRF (AHH, Ellen J. Walker); 30 Oct - 22 Nov (30-1) ESL (CHB, DAD, MGW, JRW). **Stilt Sandpiper:** 2 Aug (12) ESL (JRW); 8 Aug - 20 Sep (1-21), max on 20 Sep, I13 (WGC); 26 Sep (3), 28 Sep (14), 26 Oct (18) ESL (DAD, JRW, MGW); 1 Nov (3) ESL (DAD, JRW); **15 Nov** (2) ESL (JRW), latest regional date by 2 months. Buff-breasted Sandpiper: 10 Aug (1) I13 (JCR); 30 Aug - 20 Sep (1-4) I13 (MTOS, SJS, JRW, RTC, JBG, WGC *et al.*); 13 Sep (2) PAP (TJW); 21 Sep, 2 Oct (1) ESL (MTOS, CHB, JRW, MGW). Short-billed Dowitcher: 17 Aug (1) I13 (ECC, MHI, CKC); 23-24 Sep (1) ESL (JRW). Long-billed Dowitcher: 28 Jul (1) levee and TN 79, LKC (WGC). Dowitcher species: 1 Aug (1) levee and TN 103, LKC (WGC); 8—11 Aug (7-1) I13 (WGC). Common Snipe: 15 Nov (15) ESL (JRW). Wilson's Phalarope: 16 Aug (1) (JCR), 25 Aug (1) I13 (WGC); 13 Sep (1) PEF (MGW, JRW). RED-NECKED PHALAROPE: 25 Aug - 1 Sep (1-2) I13 (WGC, MTOS, SJS *et al.*).

Jaeger - Tern: JAEGER SPECIES: 24 Aug (1) Mississippi R., SW Shelby Co. (DNB, DAD, CPN, GRP, JRW, MGW); details to be published. FRANKLIN'S GULL: 10 Nov (7) ESL (DAD, JRW), rare species in state. Bonaparte's Gull: 30 Aug (1) PAP (AHH, NRH). Ring-billed Gull: 10 Aug (1) I13 (DJS, SJS). Caspian Tern: 2 Aug (5) (WGC), 17 Aug (1) I 13 (MHI, ECC, CKC, 11 Aug (5) PLS (AHH, NRH); 17 Sep (1) PAP (AHH); 2 Oct (14), 4 Oct (1) ESL (JRW, CHB, MGW). Common Tern: 9 Aug (1) PAP (MHI, ECC, CKC); 6 Sep (2) PAP (WAS). Forster's Tern: 2 Aug (2) PLS (JCR); 2 Aug (3), 9 Aug (4) PAP, 17 Aug (1) I13 (MHI, ECC, CKC); 30 Aug (2), 17 Sep (10) PAP (ANN, NRH); 26 Sep (14), 28 Sep (1) ESL (JRW, DAD, MGW). Least Tern: last reports, 3, 5 Sep (1), 8 Sep (0) I13 (WGC). Black Tern: 9 Aug (17) I13 (WGC); 9 Aug (2) PAP (MHI, ECC, CKC); 11 Aug (12), 25 Aug (18) PLS (JCR); 6 Sep (**74**) PAP (WAS), high; 8 Sep (1) I13 (JRW, JBG, RTC); 17 Sep (10) PAP (AHH).

Nighthawk—Vireo: Common Nighthawk: 4 Sep (kettles of 80-200, with total of 2000) MEM (JRW); 1 Nov (3) REL (JAF, SCF). Red-headed Woodpecker: 26 Oct (122) SFP (MTOS). Olive-sided Flycatcher: 16-17 Aug (1-2) NE DTC (CHB); 21 Sep (1) TOF (MTOS). Purple Martin: 16 Aug (725) LKC (JCR). Tree Swallow: 30 Aug (1015) I13 (MTOS); 9 Nov (350) ESL (DAD, JRW). House Wren: 15 Oct (2) Wapanocca NWR, ARK (CHB, HBD); 21 Oct (1) PEF (DAD, MGW); 22 Oct (2) MEM (CHB, SCF, JBW). Winter Wren: 2 Nov (1) PEF (DPB, DAD, MGW); 15 Nov (1) MEM (DPB, DHB, JAF, MGW). Sedge Wren: 5 Oct (1) NE DTC (CHB). Marsh Wren: 1 Nov (1) ESL (DAD, JRW). Eastern Bluebird: 1 Nov (19) Ponderosa and TN River Bottoms, 2 Nov (10) in 15 mi by car, DTC (CHB). Water Pipit: 22 Nov (3) ESL (JRW). Solitary Vireo: 16 Oct (1) MEM (CHB); 8 Nov (1) PEF (JRW, MTOS); 14 Nov (1) MEM (CHB). Warbling Vireo: 30 Aug (4) I13 (MTOS); 1 Sep (15+) I13 (SJS *et al.*). Philadelphia Vireo: 21 Sep (1) PEF (CHB, GRP, MGW); 24 Sep (1) SFP (HBD, SCF, NMS, Selma L. Lewis, JBW).

Warbler—Siskin: Blue-winged Warbler: 8 Sep (2), 10 Sep (4) PEF (CHB, NMS, MGW, JRW); 4 Oct (1) ESL (JRW). Golden-winged Warbler: 8-10 Sep (2-4) PEF (CHB, NMS, MGW, JRW); 18 Sep (2) PEF (CHB, HBD); 7, 14 Sep, 4 Oct (1) NE DTC (CHB); 1 Oct (1) HWR, HYC (HBD, CHB). BREWSTER'S WARBLER: 8 Sep (1) PEF (JRW), second regional record. Tennessee Warbler: 4 Nov (4) ESL (DAD, JRW). Orange-crowned Warbler: 19 Oct (3) BSU (MHI); 8 Nov (1) PEF (MGW, MTOS). Black-throated Green Warbler: 2 Aug (1) MEM (CHB). Prairie Warbler: 17 Sep (1) PAP (AHH). Palm Warbler: 19 Oct (20) BSU (MHI). Black-and-White Warbler: 1 Nov (1) ESL (DAD, JRW). CONNECTICUT WARBLER: 7 Sep (1) PEF (MGW, NMS), second published regional fall record. MOURNING WARBLER: 2 Nov (1) PEF (DPB, DAD, MGW), late. Vesper Sparrow: 15 Nov (1) ESL (JRW). LARK SPARROW: 9 Nov (5) PEF (GRP, VBR, MGW), new regional late record, previous late date 20 SEP 1984. SHARP-TAILED SPARROW: 9 Nov (1) BRF (JCR). Lincoln's Sparrow: 19 Oct (2) BSU (MHI). White-crowned Sparrow: 1 Nov (7) ESL (DAD, JRW); 8 Nov (16) PEF (MTOS); 15 Nov (50) ESL (JRW), high number. Lapland Longspur: 9 Nov (3) BRF (JCR). House Finch: 19-20 Oct (2) DYC (Cecil Ingle); 12 Nov (first arrival at Coffey Ground) MEM (BCC, LCC). Pine Siskin: 1 Nov (40) ESL (DAD, JRW); 8-28 Nov (4-50+) DYC (WGC); uncommon to locally common at a few feeders in SBC (*fide* BBC).

Locations: BRF - Britton Ford, Tenn. Nat. Wildl. Refuge, Henry Co.; BSU - Big Sandy Unit, Tenn. Nat. Wildl. Refuge, Henry and Benton Cos.; DTC -Decatur Co.; ESL - Ensley Sewage Lagoons, Shelby Co.; HWR - Hatchie Wildlife Refuge, Haywood Co.; I13 - Island 13, Mississippi River, Lake Co.; LKC - Lake Co.; MEM - Memphis; PAP - Pace Point, Tenn. Nat. Wildl. Refuge, Henry Co.; PEF - Shelby Co. Penal Farm; PLS - Paris Landing State Park, Henry Co.; REL - Reelfoot Lake, Obion/Lake Cos.; SBC - Shelby Co.; SFP - Shelby Forest State Park, Shelby Co.; TOF - T.O. Fuller State Park, Shelby Co.; WNC - Wapanocca Nat. Wildl. Refuge, Arkansas.

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HIGHLAND RIM AND BASIN REGION--Weather conditions during the fall of 1986 were varied. August temperatures throughout the region were cool, but September was extremely warm, while October and November were about normal. Nashville's rainfall in August was normal

(3.21 in), in September an inch and a half deficient (2.19 in), in October a half inch deficient (2.19 in), and in November four inches in excess (7.43 in); most other cities in the region also received more than the normal amount of rainfall over the four-month period with Lawrence Co. receiving significantly more.

The migration through the region was generally less varied than the weather. The overall impression which the season left was one of dullness so far as passerines were concerned; however, rarities among species between loons and woodpeckers on the checklist somewhat made up for that condition. Certainly the state's first Ross' Goose at Cross Creeks NWR in November caused a considerable stir in ornithological circles to judge from the cavalcade of vehicles which showed up at the refuge on November 22nd. For the first time all three phalaropes occurred in the Nashville Area in the same season. And for only the second time all three scoters appeared in the Nashville Area during one season. These and other rarities kept the season from being entirely unspectacular.

A few other matters deserve mention. Broad-winged Hawks staged a fine migration in the Nashville Area 27-28 September when over 300 were recorded, more than half of those at one site in Williamson County. The Sandhill Crane migration in the region may be the finest one on record, with nearly 2000 birds observed, most between 3-27 November. Evidence of an American Crow migration was offered from an observer in Putnam County; although probably common enough, this phenomenon is certainly little noted and reported in the region, as is the case regarding the autumn migration of Blue Jays.

Boreal invaders were little in evidence this fall. No Rough-legged Hawks had been sighted by season's end; Red-breasted Nuthatches were reported in mostly low numbers during October and then thinned out. Purple Finches were present in low to moderate numbers by the end of November; House Finches were not reported as overly numerous anywhere in the region; Pine Siskins made an appearance in mid-October but were in low numbers then and thereafter; only a few Evening Grosbeaks were present.

For their prompt and careful review of an early draft of this report, I thank John C. Robinson, Damien J. Simbeck, and Morris D. Williams.

Loon—Night-Heron; Common Loon: 12 Oct (7) OHL, SUC (MHI, ECC), ers. Pied-billed Grebe: 2 Aug (1) FRR (SJS), ers. Horned Grebe: 19 Oct (9) DRU (MHI), ers; notable influx in FKC (JRP), SWC (JCR), WMC (CAS) on 26 Nov. Double-crested Cormorant: 24 Aug (1) FCMR (JCR), ers; 19 Oct (329) DRU (MHI), max. AMERICAN WHITE PELICAN: 19-20 Oct (1) DRU (MHI, CKC), 11th middle Tennessee record and 2nd consecutive year at this site (good documentation). Great Blue Heron: 19 Oct (153) DRU (MHI), max. Great Egret: 19 Oct (86) DRU (MHI), max; 6 Nov (1) CCSP (JCR), lrs. SNOWY EGRET: 20/23 Aug (1) GSP/Green's Pond, SUC (SJS, CGD, MHI, CKC/DTC, JPC, SJS, BHS), continues Summer 86 record; 17, 23 Aug (1 imm) CCNWR (JCR), only reports. Little Blue Heron: 5 Aug (65) CCNWR (JCR), max. Cattle Egret: 24 Sep (3) Dale Hollow L., Overton Co. (RVM, Larry L. McFarlin, Linda Bowman); 8 Nov (1) CCNWR (JCR, MHI, CGD, ECC), only reports. Green-backed Heron: 2 Nov (1) MOP (JCR, SJS, BHS), lrs. Yellow-crowned Night-Heron: 2-3 Aug (3 imm, 1 ad) Tullahoma, CFC (HJP, Marjory A. Harper); 9 Aug (1 imm) MOP (JCR, SJS, BHS, DTC, JPC), only reports.

Swan-Merganser: TUNDRA SWAN: 16 Nov (1 ad) Quarry Pond, RUC (TJW), only report. Greater White-fronted Goose: 30 Nov (5) CCNWR (MHI, JCR), only report. **ROSS' GOOSE:** 20 Nov (1 ad) CCNWR (JCR), first state record (excellent documentation); details will be published. Green-winged Teal: 9 Aug (1) MOP (SJS, DTC, JPC, BHS, JCR), ers; 13 Aug (1) CCNWR (JCR); both very early. American Black Duck: 20 Aug (1) CCNWR (JCR), ers. Blue-winged Teal: 2 Aug (4) GSP (DTC, JPC), ers; 19 Oct (1400+) DRU (MHI), max. Northern Shoveler: 6 Sep (2) GSP (DTC, JPC), ers. American Wigeon: 26 Sep (3) S of Franklin, WMC (SJS), ers. Canvasback: 30 Oct (14) FRR (SJS), ers. Redhead: 6 Nov (1) FRR (SJS), ers. BLACK SCOTER: 11-12 Nov (1) FRR (SJS, MHI, CKC, JRP, Jerry L. Ingles, Chris Parrish), 5th NA & 1st WMC record; about 12th state record. Surf Scoter: 11-12 Nov (2) FRR (SJS, MHI, CKC), only report. White-winged Scoter: 25 Oct (1) OHL, SUC (CKC), only report. Common Merganser: 30 Nov (19) CCNWR (JCR), only report.

Vulture-Merlin; Black Vulture: 1 Nov (450+) GSP (DTC, JPC), max. Osprey: 12 Nov (3) Normandy L., CFC (HJP, Chloe Peebles), lrs. Bald Eagle: reports came in from CFC, DVC, FKC, HPC, LWC, PIC, SWC, and Wayne Co. Northern Harrier: 15 Aug (1 imm) GSP (CKC), new NA early fall date. Sharp-shinned Hawk: 13 Aug (1) CCNWR (JCR), ers; then 15+ reports through the end of the period. Cooper's Hawk: 30 Aug (1) Dover, SWC (CGD, m.ob.); then 18+ reports through the end of the period. Broad-winged Hawk: 28 Sep (**160**) Flagpole Fire Tower, WMC (BHS), largest number reported at 1 site in 1 day in region in many years. Red-tailed Hawk: 15 Nov (1 dark phase ad) CCNWR (JCR), at same territory that a similarly plumaged bird held previous winter. Peregrine Falcon: 5 reports 27 Sep - 16 Oct in DVC, RUC, WMC. Merlin: 6 Sep (1) CCNWR (EJW); 30 Sep (1) Bumpus Mills Recreation Area, SWC (AHH); 20 Oct (1) Bakersville, HPC (CKC); 8 Nov (1) CCNWR (JCR, CGD, MHI, ECC, CKC); only reports.

Grouse-Crane: Ruffed Grouse: 3 Nov (1) Manchester, CFC (Willa York, Grady York); 19 Nov (1) BAH (RWS); only reports. Wild Turkey: 4 reports from Hickman Co., MTC, PIC, and SWC. YELLOW RAIL: 27 Sep (1) 300 m E of Hwy. 100 on Trace Creek in SW DVC (Cliff Whitehead), 7th NA record (good documentation including mention of "white wing patches"). Sora: 4 Aug (1) West Harpeth Rd., WMC (JCR, SJS), ers & first WMC record; 16 Nov (2) PPL, RUC (MHI), lrs. Sandhill Crane: 16 Oct (heard calling) Byrdstown, PIC (RCH, Margaret Zimmerman), ers; 19 Oct (1) DRU (MHI); 2 Nov (4) LWC (DJS, Michael A. Beuerlein); 3 Nov (650+), 4 Nov (200+), 6 Nov (44), 9 Nov (260), 10 Nov (300+) PIC (*fide* RCH); 10 Nov (353) BAH (RWS); 14 Nov (50) CFC (FNM); 22 Nov (75) Dilton-Mankin Rd., RUC (*fide* Anne L. Hettish); 27 Nov (60) CFC (FNM, Erma L. Rogers); perhaps the best year ever for crane migration in the region.

Golden-Plover—Phalarope: Lesser Golden-Plover: 22 Jul (1) CCNWR (JCR), ers; 2 Nov (1) W. Harpeth Rd., WMC (JCR, SJS, BHS), first WMC record; 6 Nov (2) CCSP (JCR), lrs. Semipalmated Plover: 20 Jul (1) CCNWR (JCR), ers. Piping Plover: 16 Aug (1) GSP (CKC), only report. American Avocet: 19-21 Aug (1) GSP (DTC, JPC, m.ob.), only report. Greater Yellowlegs: 6 Jul (1) DRU (JCR), ers; 22 Nov (1) CCNWR (DJR, m.ob.). Lesser Yellowlegs: 6 Jul (1) DRU (JCR), ers; 19 Oct (4) LWP (DTC, JPC, TOS), lrs. Solitary Sandpiper: 6 Jul (3) DRU (JCR), ers; 28 Sep (1) W. Harpeth Rd., WMC (SJS), lrs. Willet: 30 Jun (1) St. Joe, LWC (DJS); 15 Aug (1) GSP (MHI, ELJ); 16 Aug (5) CCNWR (JCR); only reports. Spotted Sandpiper: 25

Oct (2) CCNWR (AHH, NRH) lrs. Upland Sandpiper: 10 Aug (1) Metro Airport, DVC (MHI, ELJ, CKC), only report. Ruddy Turnstone: 6 Sep (1) GSP (DTC, JPC), only report. Sanderling: 10 Aug (1) GSP (DTC, JPC), ers. Semipalmated Sandpiper: 13 Jul (2) CCNWR (JCR), ers. Western Sandpiper: 19 Jul (2) CCNWR (JCR), ers; 27 Jul (3) CCNWR (JCR); 10 Aug (1) GSP (MHI, ELJ); 28 Sep (1) GSP (DRJ, DTC, JPC), lrs; only reports. Least Sandpiper: 6 Jul (7) DRU (JCR), ers. Baird's Sandpiper: 13 Aug/28 Sep/4 Oct (1/1/5) GSP (DTC, JPC/DRJ, DTC, JPC/DTC, JPC), only reports. Pectoral Sandpiper: 13 Jul (1) CCNWR (JCR), ers; 26 Nov (1) CCSP (JCR), lrs & very late. Dunlin: 9 Nov (25) GSP (CAS), max. Stilt Sandpiper: 20 Jul (3) GSP (DTC, JPC, CKC, MHI), ers; 22/28 Jul (2/3) CCNWR (JCR); only reports. Buff-breasted Sandpiper: 2 Aug (1) CCNWR (MHI, ECC, CKC, JCR), ers & perhaps earliest ever in state; 9 Aug (4) Robertson Pond, LWC (DJS); only reports. Long-billed Dowitcher: 30 Jul (1) CCNWR (JCR), only report (excellent documentation). Common Snipe: 21 Aug (1) S of Franklin, WMC (SJS), ers. American Woodcock: 2 Nov (2) BAH (RWS), "incomplete flight display heard." Wilson's Phalarope: 1 Aug (1) S of Franklin, WMC (SJS); 19 Aug (1) GSP (DTC, JPC); only reports. NORTHERN PHALAROPE: 28 Sep (2) RDL (Aimon C. Niklasson, NTOS), 4th NA record (excellent documentation including sketch). RED PHALAROPE: 26 Oct (1) OHL, SUC, (CGD, MHI, CKC, m.ob.), 5th NA record (good documentation).

Gull-Tern: Herring Gull: 23 Aug (1) CCSP (JCR), ers; 12 Nov (1) FRR (SJS), first WMC record. Caspian Tern: 27 Aug (3/1) GSP/CCNWR (CKC/JCR), ers; 3 Aug (1) Granville, Jackson Co. (SJS, James D. Parrish). Common Tern: 13 Jul (2) CCNWR (JCR), ers (good documentation); 8 Aug (1 juv) PPL, RUC, (TJW, David M. McCarroll), only other report (good documentation). Forster's Tern: 18 Jul (4) Cumberland City, SWC (JCR), ers. LEAST TERN: 31 Jul (1 imm) CCNWR (JCR), only report (excellent documentation). Black Tern: 13 Jul (4) CCNWR (JCR), ers; 28 Sep (1) FRR (SJS), lrs.

Ground-Dove-Swallow: COMMON GROUND-DOVE: 4 Oct (1) S of Franklin, WMC (SJS), only 1 provisional record previously in the NA; about 8th state record. Short-eared Owl: 16 Nov (1) CCNWR (JCR), only report. Common Nighthawk: 28 Nov (1) Green Hills, DVC (PBH), lrs. Whip-poor-will: 30 Sep (2 singing) BAH (RWS), lrs. Ruby-throated Hummingbird: 27 Oct (1) Tullahoma, CFC (HJP). Yellow-bellied Sapsucker: 7 Oct (1) CLA (AHH), ers. Olive-sided Flycatcher: 22 Aug (1) Misery Swamp, MTC (AHH, EJW), only report. Yellow-bellied Flycatcher: 6 Oct (1 casualty) WSMV (KAG), only report. Acadian Flycatcher: 5 Oct (1 calling) LWC (DJS), lrs. Eastern Kingbird: 27 Sep (1) Pardue's Pond, DIC (MHI, ECC), lrs. Purple Martin: 27 Sep (1) Warner Parks, DVC (DFV), lrs. Tree Swallow: 26 Nov (1) CCNWR (JCR), lrs. Barn Swallow: 16 Nov (1) Percy Priest WMA, RUC (MHI), lrs & new NA late fall date.

Crow-Catbird: American Crow: 4/17 Nov (265+/160+) BAH (RWS), "flying over in the loose straggling groups . . . ., heading S or SSW"; RWS suspects migratory movement was involved. Red-breasted Nuthatch: 4 Oct (1) Leiper's Fork, WMC (BHS), ers. Brown Creeper: 7 Oct (1) CLA (AHH), ers. House Wren: 2 Nov (1) MOP (BHS), lrs. Winter Wren: 7 Oct (1/2) CLA/BAH (AHH/RWS), ers. Sedge Wren: 2 Aug (6) DRU (JCR), ers. Marsh Wren: 11 Nov (1) Bear Creek WMA, SWC, (JCR), lrs. Golden-crowned Kinglet: 6 Oct (1) Edwin Warner Park, DVC (DFV), ers. Blue-gray

Gnatcatcher: 31 Oct (1) CFC (MDH), lrs. Veery: 31 Aug (1) Hopkins Lane, DVC (KAG), ers. Swainson's Thrush: 2 Sep (2) CLA (AHH), ers. Gray Catbird: 27 Oct (1) SUC (JPC), lrs.

Vireo-Chat: Warbling Vireo: 6 Oct (1 casualty) WSMV (KAG), lrs. Golden-winged Warbler: 24 Aug (1) FCMR (JCR), ers. Blue-winged X Golden-winged Warbler hybrids: 6 Sep (1) LWC (DJS); 9 Sep (1) CLA (AHH). Orange-crowned Warbler: 4 reports 18 Oct - 2 Nov. Chestnut-sided Warbler: 21 Aug (1) CLA (AHH), ers. Cape May Warbler: 19 Oct (1) Boxwell Reservation, Wilson Co. (DJS, ARH, RDH, m.ob.), only report. Black-throated Blue Warbler: 6 Oct (1 casualty) WSMV (PBH), only report. Prairie Warbler: 18 Oct (1) BAH (RWS), lrs. Worm-eating Warbler: 4 Oct (1) CLA (AHH), lrs. Kentucky Warbler: 4 Oct (1) Lewis Co. (George R. Mayfield, Jr.), lrs. Mourning Warbler: 7 Sep (1) LWC (DJS); 28 Sep (1) RDL (CKC); only reports. Canada Warbler: 10 Aug (1) RDL (CKC), ers. Yellow-breasted Chat: 3 Oct (1) Gallatin, SUC (DTC, JPC), lrs.

Grosbeak-Grosbeak: Blue Grosbeak: 28 Sep (1) Cheatham Dam, CHC (MHI, ECC), lrs. Bachman's Sparrow: 2 Aug (1) 5 km SE of Fall River, LWC, in Giles Co. (DJS), only report. Vesper Sparrow: 14 Oct (1) Del Rio Pk., WMC (SJS), ers. Lark Sparrow: 2 Aug (1) DRU (JCR), only report. Grasshopper Sparrow: 28 Sep (1) RDL (CKC), only report. LE CONTE'S SPARROW: 7-8 Nov (1) CCNWR (JCR, m.ob.), only report (excellent documentation). SHARP-TAILED SPARROW: 8 Nov (1) CCNWR (JCR, MHI, ECC, CKC, CGD, Robert English), only report (excellent documentation). Lincoln's Sparrow: 6 Oct (1 casualty) WSMV (DFV), ers. Lapland Longspur: 22 Nov (1) CCNWR (JCR, SJS, m.ob.), only report. Bobolink: 24 Aug (1) MC (DFV), ers; 27 Sep (5) MC (CGD): only reports. Brewer's Blackbird: 30 Nov (1) LWC (DJS), only report. Northern Oriole: 23 Oct (1) CFC (MDH), lrs. Purple Finch: 24 Oct (7) BAH (RWS), ers. Pine Siskin: 21 Oct (1) BAH (RWS), ers. Evening Grosbeak: present but not carefully reported.

Locations: BAH - Barnes Hollow, Putnam Co.; CCNWR - Cross Creeks National Wildlife Refuge, Stewart Co.; CCSP - Cumberland City Steam Plant, Stewart Co.; CFC - Coffee Co.; CHC - Cheatham Co.; CLA - Clarksville; DRU - Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co.; DVC - Davidson County; FCMR - Fort Campbell Military Reservation, Stewart and Montgomery Cos.; FKC - Franklin Co.; FRR - Franklin Reservoir, Williamson Co.; GSP - Gallatin Steam Plant, Sumner Co.; HPC - Humphreys Co.; LWC - Lawrence Co.; LWP - Lewis Pond, Sumner Co.; MC - Metro Center, Davidson Co.; MOP - Monsanto Ponds, Maury Co.; MTC - Montgomery Co.; NA - Nashville Area (includes all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, and Wilson Cos., as well as parts of Dickson and Trousdale Cos.); OHL - Old Hickory Lake (in Smith, Trousdale, Wilson, Sumner, and Davidson Cos.); PIC - Pickett Co.; PPL - Percy Priest Lake (in Davidson, Rutherford, and Wilson Cos.); RDL - Radnor Lake State Natural Area, Davidson County; RUC - Rutherford Co.; SUC - Sumner Co.; SWC - Stewart Co.; WMC - Williamson Co.; WSMV - WSMV tower, Davidson Co.

Addendum: Stilt Sandpiper: 2 Nov 1981 (2) GSP (DTC, JPC), new NA late fall date.

Corrigendum: Migrant 57:28, 1986: in the entry for Marsh Wren delete "LWC" from the counties listed.

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EASTERN RIDGE AND VALLEY REGION - The weather this autumn consisted of mild temperatures, normal to above normal rainfall (finally), and few cold fronts with their associated waves of migrants. The Johnson City and Knoxville areas experienced above normal temperatures until mid-November, when a strong cold front passed through and was followed by very cold temperatures. This cold snap included the first killing frosts, which were much later than expected. Rainfall was near normal for all four months in the Johnson City and Knoxville areas, but still left a yearly deficit of several inches. In Chattanooga, August rainfall was 0.6 inches below normal; however, September was 1.6 inches above normal, October +3.7 inches, and November +3.4 inches. Productive fronts passed through the region on 29 August, 6 and 14 October, and 11 November.

Drought conditions during the spring and summer caused lake and pond levels to be quite low, leaving some good shorebird areas high and dry. But even so, "shorebird numbers at areas with managed water levels, such as Kingston Steam Plant and Eagle Bend Fish Hatchery, were fairly low this year." A peak of 930+ shorebirds occured on 16 August at Douglas Lake. The lack of frontal systems resulted in a rather lackluster passerine migration. Most received little comment. Only a few winter finches had arrived by the end of the period. Peak numbers, in some instances record numbers, of water birds appeared just after the front of 11 November, as snow and cold hit the Midwest and Ohio Valley. This wave included upper east Tennessee's first Black Scoter.

The region's two banding stations reported below average capture rates. Chuck Nicholson operated the Norris station from 10 August to 17 October - not as late as in past years. He banded 511 birds of 52 species in 566 net hours, for a rate of 0.903 birds per net hour. This rate is similar to that of the last two years, but below his long-term average of 1.28 birds per net hour. Rick Knight operated the Austin Springs station from 4 September to 31 October, for the seventh consecutive fall. He banded 618 birds of 47 species in 540 net hours. This rate of 1.14 birds per net hour is below his average of 1.35. The peak capture dates there were 6-7 and 15-16 October.

Loon-Ibis: Red-throated Loon: A grounded, but apparently uninjured, bird was picked up from a Scott Co., Virginia road by a state trooper in mid-to-late Nov, kept on a small pond for a few days, then released on the Holston River at KPT in late Nov (E.E. Scott). Common Loon: 31 Oct (1) BOL (SG), ers; good movement through upper half of region - 11 Nov (152) BOL (RLK), more than double the previous high count there; 16 Nov (70) Tellico Lake, Monroe Co. (RC, CPN); 20 Nov (55) Fort Loudoun Lake, KNC (RC); no reports from CHA area. Pied-billed Grebe: 11 Aug (1) AUS (RLK), ers; 8 Nov (150) HRA (CTOS), max. Horned Grebe: 11 Nov (4) BOL (RLK), first there; not mentioned elsewhere. Double-crested Cormorant: many reports - 10 Sep (1/6) NRL/CHA (CPN/Dan N. Williams, Jr.); 15 Sep (1), 3-31 Oct (1-3) AUS (RLK); 17 Sep (1) CHL (CPN); 28 Sep (1) KNC (James T. Tanner); 25 Oct (1) HRA (PCH, AMJ, SLW *et al.*); 11 Nov (75) NRL (JCH), very high number for region. American Bittern: 19 Oct (1) Ooltewah, Hamilton Co. (JSL); 24-26 Oct (1) Luttrell, Union Co. (Lucille Kelly, RS, SS); only reports. Great Blue Heron: 19 Oct (306) DOL (JAK), max. Great Egret: 1-31 Aug (1-2) SAB (KHD, LHD); 1 Aug - 13 Oct (2-19) HRA (m.ob.); 3 Aug - 1 Nov (max 14 on 6 Sep) DOL (JAK); 6 Aug (1) AUS (RLK); 9-23 Aug (3) KSP (KTOS); 16-30 Aug (2-10) CRL (RLK); 29 Aug (1) EBF (CPN); 7 Oct

(23) AUS (RLK), very high number there; 26 Oct (1) BOL (RLK). Snowy Egret: 16 Aug (1) HRA (AMJ); 6 Oct (1) AUS (RLK), latest in JNC area by 4 days. Little Blue Heron: 20 Jul - 1 Sep (4-17) HRA (m.ob.); through 6 Aug (1-4) EBF (LJF, CPN); 3 Aug, 6 Sep (3/1) DOL (JAK). Cattle Egret: 10, 15 Aug, 14 Sep (1-2) HRA (KHD, LHD, DCC, RAR); 13 Sep (1) AUS (RLK), latest in JNC area by 5 days. Green-backed Heron: 31 Oct (1) BOL (SG), lrs. Black-crowned Night-Heron: 20 Jul - 6 Sep (1-35) KSP (KHD *et al.*), high numbers there; 16 Aug (1) HRA (AMJ); 21 Aug - 11 Oct (1-4) AUS (RLK); 20 Sep (20) DOL (JAK); 10 Oct (36) CRL (RLK), max there, but lower than previous years; 14 Oct - 6 Nov (3) KPT (RAP). Yellow-crowned Night-Heron: 25 Oct (1) HRA (PCH, AMJ, SLW *et al.*), only report. White Ibis: bird mentioned last report at EBF last seen 1 Aug (LJF); 2 Aug (1 imm) CHA (Gilda Lyon).

Waterfowl: Tundra Swan: 12 Nov (3) BOL (RAP, BH). Snow Goose: 8 Nov (1 white, 1 blue) HRA (CTOS); 30 Nov (2 blue) SAB (KHD). Canada Goose: 26 Sep (75) AUS (LHTOS), max there; 30 Oct (761) CHL, HRA, (886) WBL (TWRA), max. Green-winged Teal: 7 Sep (1) AUS (RLK), ers; 11 Oct, 29 Nov (150) DOL (JAK), max there; 13 Nov (21) BOL (RLK), good number there; 22 Nov (300) HRA (KHD, LHD), max there. American Black Duck: 21 Nov (571) CHL, HRA (TWRA), max. Northern Pintail: 5 Nov (2) BOL (RLK); 8-30 Nov (5-30) HRA (m.ob.). Blue-winged Teal: 10 Aug - 16 Sep (4-40) KSP (m.ob.); 7 Sep - 9 Oct (max 52 on 28 Sep) AUS (LHTOS). Northern Shoveler: 29 Sep (4) AUS (RLK), ers. Gadwall: 21 Nov (752) CHL, HRA (TWRA), max. American Wigeon: 21 Nov (598) CHL, HRA (TWRA), max. Canvasback: 11 Nov (1) JNC (RAP, BH); 15 Nov (10) NIL (SJS, CAS); 21 Nov (1) BOL (MD, SG); 22-29 Nov (1-3) HRA (KHD, LHD). Redhead: 11 Nov (12) BOL (RLK). Ring-necked Duck: 22 Nov (1200) HRA (KHD, LHD), thought to be the most ever reported there. Greater Scaup: 15 Nov (1) NIL (SJS, CAS), only report. Lesser Scaup: 27 Jul - 17 Aug (1) KSP (KHD, LHD); 13 Nov (50) BOL (RLK), max there. BLACK SCOTER: 11 Nov (1 female) BOL (RLK), twelfth state record, first east of KNC. White-winged Scoter: 14 Nov (4) BOL (SG, GWS). Common Goldeneye: 21 Nov (38) CHL, HRA, (91) WBL (TWRA), max. Bufflehead: 21 Nov (52) CHL, HRA, (31) WBL (TWRA), max. Hooded Merganser: 22 Nov (250) HRA (KHD, LHD), max. Common Merganser: 28 Nov (2) BOL (MD), only report. Red-breasted Merganser: 14 Nov (3) BOL (SG, GWS). Ruddy Duck: 8-29 Nov (3-17) HRA (CTOS); 11 Nov (5) BOL (RLK).

Osprey—Crane; Osprey: 21 Aug - 17 Oct (1-2) AUS (LHTOS); 8-25 Oct (1-2) CRL (RLK); apparently normal numbers elsewhere. Bald Eagle: 28 Aug (1 ad) NIL (TJW); 6 Oct (1 imm) AUS (RLK); 10 Oct (1 ad) CRL (RLK); up to 2 present on NRL from mid-Oct on (JCH *et al.*); 13 Nov (1 imm) BOL (RLK). Northern Harrier: 30 Aug (1/1) AMM/HRA (PDR/LHD *et al.*), ers; 1 Sep (1) SAB (LHD); 18 Sep (1) AUS (RLK). only JNC area sighting. Sharp-shinned Hawk: 9 sightings in JNC area, about normal (LHTOS). Cooper's Hawk: 7 sightings in JNC area, about normal (LHTOS). Peregine Falcon: the number of sightings continues to increase - 6 Sep (1) KSP (KHD, LHD *et al.*); 14 Sep (1) Mt. Roosevelt, Roane Co. (RC); 17 Sep - "first part of Nov" (1 reported 7 times) downtown CHA (William G. Raoul, PDR); 30 Sep (1) JNC (RLK); 2-3 Nov (1) NIL (AMJ, RJH, PCH). Sora: 28 Sep (1) KNC (RS, SS), only report. Common Moorhen: 13 Aug (1) CHL (AMJ); 16 Oct (1) KNC (Morton Massey *et al.*). Sandhill Crane: 30+ reports of 3000+ birds in Hamilton, Meigs, McMinn, Bradley, Rhea and Polk Cos. (m.ob.).

Plover—Phalarope: Black-bellied Plover: 16 Aug (1) DOL (JAK); 1 Sep

(1) KSP (KHD, LHD); 8 Sep (1) AUS (RLK), only third JNC area record. Lesser Golden-Plover: 1 Sep (10) KSP (KHD, LHD). Semipalmated Plover: 16 Aug (52) DOL (JAK), max. Piping Plover: 25 Aug (1) EBF (LJF). American Avocet: 11-12 Aug (1) KSP (m.ob.); 16 Aug (1) HRA (JSL, CDB); 1 Nov (2) DOL (JAK). Greater Yellowlegs: 10, 16 Aug, 6 Sep, 1 Nov (1-10) DOL (JAK); 2-8 Sep, 10-22 Oct (1-8) AUS (LHTOS); 13 Nov (1) KNC (RC), lrs. Lesser Yellowlegs: 20 Jul - 23 Aug (2-15) KSP (m.ob.); 3-16 Aug (10-36) DOL (JAK); 8 Sep (4) AUS (RLK). Solitary Sandpiper: good flight through JNC area 28 Jul - 2 Sep (LHTOS). Willet: 24 Aug, 6 Sep (1) KSP (m.ob.). Upland Sandpiper: 14 Sep (1) HRA (RAR, LHD). Ruddy Turnstone: 9-20 Aug (1) KSP (m.ob.); 10 Aug (1) EBF (James M. & Betty Reid Campbell). Red Knot: 16 Aug (1) DOL (JAK). Sanderling: 10, 16 Aug, 8 Oct (1-2) KSP (m.ob.); 25 Oct (1) HRA (CTOS); only reports. Semipalmated Sandpiper: 20 Jul - 16 Sep (8-50) KSP (m.ob.); 3 Aug - 6 Sep (max 320 on 16 Aug) DOL (JAK). Western Sandpiper: 13 Aug (6) HRA (AMJ); 16 Aug (2) DOL (JAK); 17 Aug - 16 Sep (2-5) KSP (m.ob.). Least Sandpiper: 20 Jul - 16 Sep (1-40) KSP (m.ob.); 29 Jul - 29 Aug (1-7) JNB (RLK); 16 Aug (23) DOL (JAK); 14 Sep, 6 Oct (1) AUS (RLK); 9 Nov (3) SAB (KHD, LHD). White-rumped Sandpiper: 15-16 Sep (1-2) KSP (AMJ, RJH). Baird's Sandpiper: 10 Aug, 6, 16 Sep (1-2) KSP (KHD, LHD, RJH *et al.*). Pectoral Sandpiper: 20 Jul - 17 Oct (1-15) KSP (m.ob.); 29 Jul - 19 Aug (5-9) JNB (RLK); 3 Aug - 6 Sep (max 490 on 16 Aug) DOL (JAK). Dunlin: 2 early reports - 2 Sep (3) SAB (LHD); 6 Sep (1) DOL (JAK); then - 8, 17 Oct (1/8) KSP (RS, SS/RLK); 25 Oct (10) HRA, (42) SAB (KHD, LHD), max there; 1 Nov (110) DOL (JAK), max there; 21 Nov (8) BOL (SG, GWS). Stilt Sandpiper: 7 Aug (1) JNB (RLK); 10 Aug - 16 Sep (1-4) KSP (m.ob.). Dowitcher sp.: 16 Aug (16) DOL (JAK); 17 Aug (1) KSP (KHD, LHD *et al.*); 6 Sep (3) DOL (JAK); the first 2 records reported as Short-billed. Common Snipe. 2 Sep (11) SAB (LHD); 7 Sep (1) AUS (RLK); both early. American Woodcock: 10 Sep (1) AUS (RLK), ers. Wilson's Phalarope: 6 Sep (1) KSP (KHD, LHD *et al.*). Red-necked Phalarope: 6 Sep (1) DOL (JAK).

Gull-Sapsucker: Ring-billed Gull: 23 Aug (1) KSP (CDB, LHD, JTP *et al.*), very early. Herring Gull: 15 Sep (1) AUS (RLK), earliest in JNC area by 9 days. Caspian Tern: 9 Aug - 1 Sep (1-2) KSP (m.ob.); 16 Sep (5) CHL (CPN). Common Tern: 9-24 Aug (1-2) KSP (m.ob.). Forster's Tern: 2 Sep (17) SAB (LHD); 24 Sep (1) AUS (RLK); 4 Oct (1) CHL (KHD); 11 Oct (1) KNC (ABS *et al.*); 26 Oct (2) BOL (RLK). *Sterna* sp.: 6 Aug (2) NRL (CPN); 28 Aug (2) AUS (RLK); 1 Sep (25) WBL, Meigs Co. (CPN). Black Tern: 5 Aug, 19 Sep (1) SAB (KHD, LHD); 9 Aug (7) NRL (CPN); 1 Sep (2) KSP (KHD, LHD); 17 Sep (1) CHL (CPN). Yellow-billed Cuckoo: regular through 10 Oct in JNC area (LHTOS); 1 Nov (2) KNC (ABS), very late. Common Barn-Owl: 15 Sep, 3 Nov (1-2) AMM (James D. Rowell, Jr.), only report. Common Nighthawk: good flight over JNC, last on 14 Oct (RLK). Ruby-throated Hummingbird: 1 Nov (1) KNC (ABS, Mark Reeves), very late. Red-headed Woodpecker: 24 Aug (1) JNB (RLK, GDE); 11 Oct (1) Campbell Co. (George W. McKinney); 6, 22 Nov (5/1) NRL (JCH); only reports. Yellow-bellied Sapsucker: 10 Oct (1) JNC (GWS), ers.

Flycatcher-Vireo: Acadian Flycatcher: 25 Sep (1 b) AUS (RLK). "Traill's" Flycatcher: 9-28 Sep (7 b) AUS (RLK). Least Flycatcher: 13-18 Sep (4 b) AUS (RLK). WESTERN KINGBIRD: 5 Sep (1) HRA (DCC, C. Richard Hughes), thought to be the first CHA area record. Scissor-tailed Flycatcher: 13 Aug - 14 Sep (1) HRA, Meigs Co. (m.ob.), fourth consecutive year at this site. (Has anyone looked for a nest?-Ed.). Purple Martin: 8 Sep

(2) AUS (RLK), lrs. Tree Swallow: 6 Aug - 17 Oct (1-8) AUS (LHTOS); 11, 15 Oct (40/50) SAB (KHD, LHD). Northern Rough-winged Swallow: 20 Sep (1) AUS (RLK), lrs. Bank Swallow: 26 Aug - 9 Sep (2-4) AUS (RLK). Barn Swallow: 11 Oct (1) SAB (KHD), lrs. Red-breasted Nuthatch: 28 Sep (1) KNC (KTOS), ers; several more scattered reports in KNX area to EOP; 25 Nov (1) BOL (RLK), first in JNC area; none in CHA area. Brown Creeper: 29 Aug (1) KNX (Barry Fleming), very early. House Wren: 5 banded, average 1, at AUS (RLK); 26 Nov (1) Raccoon Mountain Pumped Storage Reservoir, Marion Co. (RJH), lrs. Winter Wren: 6 Oct (1) AUS (RLK), ers. Sedge Wren: 14-15 Sep, 9 Oct (1) AUS (RLK); 30 Oct (1) AMM (JTP); 6 Nov (1) MVM (RAP); 12 Nov (1) CHA (JTP). Marsh Wren: 7, 11 Oct (1/1 b) AUS (RLK); 11 Oct (1) KNC (ABS *et al.*); 21 Oct (1) AMM (JTP); 31 Oct, 1 Nov, (1) MVM (RAP). Blue-gray Gnatcatcher: 8 Oct (1) Hamblen Co. (RLK), lrs. Gray Catbird: 24 banded, average 7, at AUS (RLK). Water Pipit: 10 Oct (1) CRL (RLK), ers. Cedar Waxwing: very numerous all period in JNC area, with many flocks of up to 50 birds (LHTOS); 5 Nov (200+) BOL (RLK), max; 7 Nov ("flocks") Cumberland Mountain State Park (PBH, CPN); no mention from other areas. Loggerhead Shrike: 3 sightings in JNC area (RLK, GDE); no mention from other areas. Solitary Vireo: 14 Nov (2) KNX (JCH), lrs.

Warblers: Orange-crowned Warbler: 20 Oct (1) KNX (JCH); 24 Oct (1) BOL (MD, SG). Yellow Warbler: 9-25 Sep (4 b) AUS (RLK). Magnolia Warbler: 25 Aug (1) KNX (JCH), ers. Cape May and Blackburnian Warblers: 26 Oct (1 each) KNX (JCH, Marcia L. Davis, Jim & Betty Mason), lrs. Palm Warbler: 10 Sep - 29 Oct (38 b) AUS (RLK). Bay-breasted Warbler: much lower than average numbers banded at NOR (CPN). BLACKPOLL WARBLER: 9 Oct (2 b, with 1 recaptured on 15 & 22 Oct) AUS (RLK). Prothonotary Warbler: 29 Aug (1) AUS (SG, GWS), only report. Northern Waterthrush: 16 Oct (1) JNC (GOW, FJA), lrs. Kentucky Warbler: 7 Oct (1) AUS (RLK), only report. Mourning Warbler: 9, 14 Sep (2 b) AUS (RLK); 18 Sep (1 b) NOR (CPN); 28 Sep (1) KNX (ARH, RDH). Common Yellowthroat: 1 Nov (1) MVM (RAP), lrs. Wilson's Warbler: present in higher than average numbers - 9-28 Sep (5 b, average 1) AUS (RLK); 7 banded, average 2, at NOR (CPN); plus several sight records at AUS, KNX, NOR. Canada Warbler: 20 Aug (1) KNX (JCH), misses early record there by 1 day.

Grosbeak-Grosbeak: Rose-breasted Grosbeak: 16 Aug (1 b, imm male with light body molt) NOR (CPN), "probably wandered from nesting area in nearby Cumberland Mtns." Indigo Bunting: mixed view - above average numbers at NOR (46 b, average 15) (CPN); slightly below average numbers at AUS (7 b, average 10) (RLK). Vesper Sparrow: 15-31 Oct (1-5, with 2 b) AUS (RLK); 30 Oct (6) MVM (RAP); 5 Nov (5) Tri-cities Airport, Sullivan Co. (RLK); 12 Nov (1) CHA (JTP). Savannah Sparrow: 9 Sep (1) AUS (RLK), ers; 20 banded, average 13 AUS (RLK). Fox Sparrow: 19 Nov (2) Nolichucky River, Washington Co. (RLK), ers. Lincoln's Sparrow: 3, 20 Oct (2 b, average 10) AUS (RLK); 11 Oct (2 b) NOR (CPN); only reports. Swamp Sparrow: 63 banded, first on 6 Oct AUS (RLK). White-crowned Sparrow: 7 banded, first on 15 Oct AUS (RLK). Bobolink: 4 Sep - 1 Oct (1-7) AUS (RLK); 20 Aug, 18 Sep (12/100+) MVM (RAP). Northern Oriole: 27 Sep (1) BOL (MD, Joy Kyle), lrs. Purple Finch: 30 Oct (18) CHA (AMJ), ers; rather low numbers throughout region to EOP. Pine Siskin: 23 Oct (4) NOR (CPN), ers; a few more scattered reports in northern half of region to EOP; none in CHA area. Evening Grosbeak: 16 Sep (2 females photographed)

CHA (Charles L. Phillips), very early; 6 Nov (6) SAB (KHD, LHD); 25 Nov (18) BOL, (6) JNC (RLK); only reports.

Corrigendum: Migrant 56:81, 1985 - in entry for Bachman's Sparrow, Berry Island (in CRL) is in Hawkins Co., not Grainger Co.

Addenda: Black-crowned Night-Heron: 5 Sep 1983 (200+) CRL (RLK). Lesser Golden-Plover: 2 Nov 1984 (1) KSP (RLK, Richard Hegler). Buff-breasted Sandpiper: 4 Sep 1982 (2) KSP (LHTOS); 3 Sep 1983 (9) KSP (LHTOS). COMMON REDPOLL: 5 Jan 1986 (2) Bowmantown, Washington Co. (Edward H. Schell).

Locations: AMM — Amnicola Marsh, Hamilton Co.; AUS - Austin Springs, Washington Co.; BOL - Boone Lake, Sullivan & Washington Cos.; CHA - Chattanooga; CHL - Chickamauga Lake, primarily in Hamilton Co.; CRL - Cherokee Lake, Grainger, Hamblen, Hawkins, & Jefferson Cos.; DOL - Douglas Lake, primarily in Jefferson Co., but also in Cocke & Sevier Cos.; EBF - Eagle Bend Fish Hatchery, Anderson Co.; HRA - Hiwassee River Area, primairly in Meigs Co., but also Bradley, McMinn & Rhea Cos.; JNB -Jonesborough, Washington Co.; JNC - Johnson City; KNC - Knox Co.; KNX - Knoxville; KPT - Kingsport; KSP - Kingston Steam Plant, Roane Co.; NIL -Nickajack Lake, Marion Co.; NOR - Norris, Anderson Co.; NRL - Norris Lake, Union Co.; MVM - Meadowview Marsh, Sullivan Co.; SAB - Savannah Bay, Hamilton Co.; WBL - Watts Bar Lake, Meigs, Rhea & Roane Cos.

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EASTERN MOUNTAIN REGION - In the northern part of the region, temperatures for the entire period were above normal, and October and November were exceptionally warm and mild. One very light frost occurred on 21 October and the first killing frost occurred on 14 November, almost a month later than normal. Rainfall was at or slightly above average.

The region's first Swallow-tailed Kite was found in Polk County in late August, and this report may have renewed attention to this seldom-birded county. A heavy movement of waterbirds into the area followed the first cold weather on 12-14 November. Unprecedented numbers of loons and cormorants were reported in the northeast corner of the region, and several hundred ducks moved into the newly-created Chota Waterfowl Refuge on Tellico Lake near the southern end of the region. Northern finches started appearing on 26 October in what may be the start of a major influx into the area.

Loon-Duck: **COMMON LOON:** 12 Nov (400+) RNC (RLK) - high count for region, and one of the highest for the state; 15 Nov (47) RNC (GOW). DOUBLE-CRESTED CORMORANT: 2 Nov (1) TEL (ABS, RC); 12 Nov (**170**+) RNC (RLK); 13 Sep, 19 Oct, 13 Nov (1/4/3) Pittman Center, Sevier Co. (JAK); 15 Nov (2) RNC (GOW); 16 Nov (1) TEL (CPN, RC). American Bittern: 2, 16 Nov (1) CWR (ABS, RC, CPN), late. Green-backed Heron: 27 Sep (2) ELI (GDE, HHF), lrs. Yellow-crowned Night-Heron: regular to 25 Aug at ELI (*fide* GDE); 28 Sep (1) ELI (RLK). Canada Goose: 3-8 regular throughout period on Watauga River (GDE *et al.*). Northern Pintail: 27-30 Nov (1) Razor Farm, ELI (CFW). Blue-winged Teal: present in ELI area 9 Sep - 5 Oct (LHTOS). Redhead: 22 Nov (1) WGI (CFW), only report. Lesser

Scaup: 30 Oct (2) WIL (FJA), ers. Bufflehead: 30 Oct (3) WIL (FJA), ers, late. Hooded Merganser: 13 Nov (6) RIL (LHTOS), ers. Common Merganser: 22 Nov (1) WGI (CFW). Ruddy Duck: 12 Nov (17) RNC (RLK).

Kite-Tern: **SWALLOW-TAILED KITE:** 19-28 Aug (1) Reliance, Polk Co. (J. Craig Watson, m.ob.), first area record. Osprey: 29 Aug - 12 Oct in ELI area (LHTOS); 16 Nov (1) CWR (RC, CPN), late. Bald Eagle: 16 Nov (1 ad) CWR (RC, CPN). Sharp-shinned Hawk: 5 reports in ELI area, low (LHTOS). Cooper's Hawk: 7 reports in ELI area, about average (LHTOS). Broad-winged Hawk: 27 Sep (1) ELI (LHTOS), last ELI area report. GOLDEN EAGLE: 23 Aug (1 imm) Indian Gap, GSMNP (PDH, Burt Jones); 17 Oct (1 imm) RNM (RAP). Merlin: 27 Sep (1) Holston Mountain (GOW, Howard Langridge). Peregrine Falcon: 22 Sep (1) RNM (John Martin). Virginia Rail: 2, 16 Nov (2) CWR (RC, CPN, ABS). Sora: 2 Nov (6) CWR (RC, ABS). Semipalmated Plover: 5 Sep (1) St. John's Pond, Washington Co. (FJA), only report. Greater Yellowlegs: 30 Sep (3) ELI (GOW), only report. WILLET: 8 Nov (1) RNC (RLK). Black Tern: 15 Aug (19) WTL (GDE), high number for area.

Cuckoo - Vireo: Black-billed Cuckoo: 4 Aug (1) ELI (GOW), only report. Yellow-billed Cuckoo: 27 Sep (1) RNM (FJA, CS), lrs. Great Horned Owl: 1-2 during SEP at ELI (HHF). Barred Owl: 2 Aug (1 seen) RNM (GOW); 27 Sep (3 heard) RNM (FJA, CS). Ruby-throated Hummingbird: 18 Oct (1) ELI (GDE), late. Yellow-bellied Sapsucker: 14 Oct (1) ELI (Lois Herndon), ers. Eastern Kingbird: 5 Sep (3) RNM (GDE, CFW, GWS), lrs. Purple Martin: very successful results in one ELI colony, 95% of 130 nests fledged 5-4 y each (*fide* GDE). Tree Swallow: 27 Sep (3) RNM (FJA, CS), lrs. Brown Creeper: 22 Nov (1) ERW (GWS), ers. Marsh Wren: 2 Nov (3), 16 Nov (2) CWR (RC, ABS, CPN). Swainson's Thrush: in ELI area 5 Sep - 12 Oct, average fall migration (LHTOS). Cedar Waxwing: abundant through period in ELI area (LHTOS). Loggerhead Shrike: 30 Nov (1) WIL (GDE), only report. Philadelphia Vireo: 14, 27 Sep (1) RNM (FJA, CS).

Warbler - Grosbeak: Blue-winged Warbler: 5 Sep (2) RNM (LHTOS). Golden-winged Warbler: 14 Sep (1) RNM (FJA, CS), lrs. Tennessee Warbler: 16 Oct (2) ELI (HHF), lrs. Magnolia Warbler: 10 Oct (1) RNM (CFW), lrs. Yellow-rumped Warbler: 10 Oct (1) ELI (GDE), ers. Blackburnian Warbler: 3 Oct (1) WIL (GWS, MD), lrs. Worm-eating Warbler: 27 Sep (1) ERW (GWS, SG), lrs. Wilson's Warbler: 27 Sep (1) WTL (GOW, Howard Langridge), lrs. Northern Oriole: 6 Sep (1) RNM (GDE, GOW), lrs. Purple Finch: 7 Oct (1) ELI (Lynn Miller), ers. House Finch: heavy influx into ELI area on 1 Nov (*fide* GDE). Red Crossbill: 23 Aug (small flock) Newfound Gap, GSMNP (PDH, Burt Jones); 24 Oct (8) Unaka Mtn. (RAP). Pine Siskin: 26 Oct (75+) RIL (GDE, HHF), ers. Evening Grosbeak: 28 Nov (17) ELI (GDE), ers.

Locations: CWR - Chota Waterfowl Refuge, Tellico Lake, Monroe Co.; GSMNP - Great Smoky Mountains Nat. Park; ELI - Elizabethton; ERW - Erwin, Unicoi Co.; RIL - Ripshin Lake, Carter Co.; RNC - Roans Creek, Johnson Co.; RNM - Roan Mountain; WGI - Wagner's Island, Carter Co.; WIL - Wilbur Lake, Carter Co.; WTL - Watauga Lake.

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AUTUMN HAWK COUNTS — 1986

AUDREY R. HOFF

A spectacular *Accipiter* migration and the impressive beginnings of 3 new hawkwatch sites highlighted the 1986 Tennessee Autumn Hawkwatch season. Observers logged 265.4 hours this year, up considerably from last year's 182 hours, and counted a total of 11,161 raptors of 13 species (Table 1), for a total of 42 hawks/hour. Three lookouts were manned for 15 or more days (Table 2), primarily during September and the first week of October; there was little coverage later in the season.

Sewanee Cross, located at the University of the South, Sewanee, Franklin Co., Tennessee, was manned for the first time this year. James A. Peters and Jerry Ingles coordinated the 15 days of hawkwatching there. Although the total number of hours was low (26.4 hours), the site was covered for a few hours every day from 23-29 September, and 2111 Broad-winged Hawks (*Buteo platypterus*) were counted during this period.

Two other new sites also showed potential. Flagpole Fire Tower, in Williamson Co., was manned by Barbara Stedman, and was the western-most site manned in Tennessee this year. She reported 296 raptors in 17.7 hours, with a high of 160 Broad-winged Hawks on 28 September. The other new site was Audubon Mt., where Lil Dubke counted 305 Broadwings on 20 September. This lookout is above Sale Creek on the eastern slope of Walden's Ridge, at an elevation of 1800 ft., in northern Hamilton Co. near the Bledsoe and Rhea Co. lines.

A total of 10,196 Broad-winged Hawks were counted this year (38.4/hour). The majority came through the state between 14-28 September, a rather wide-spread migration, possibly due to the lack of major cold fronts. The first day of a major movement came on 17 September, when Paul Hartigan reported 706 Broadwings from Thorn Hill. The greatest numbers (515) were seen between 1500-1800 hours, and were still at a very high altitude. That night, a weak cold front moved through the state, and the morning of 18 September was very rainy, with a low cloud cover. The clouds began breaking up at mid-day, and Audrey Hoff counted 2702 Broadwings between 1330-1500 hours at Look Rock. Most of these were seen lifting up out of the trees and flying in long streams just over the ridgetops. At 1500 hours, heavy clouds moved in again, and few Broadwings were seen after that time.

This was the end of the first "wave" of Broadwings. The next day Laurie Armstrong counted only 150 in 4 hours at Look Rock, and Sue Bell saw no

TABLE 1. AUTUMN HAWK COUNTS — 1986

DATE	LOCATION	REPORTER (# Obs.)	HOURS	TV	BV	SS	CH	UA	RT	RS	BW	UB	NH	OS	AK	OTHER	TOTAL
09/12	Sewanee	J. Peters (1)	1.8	—	—	—	—	—	—	—	44	—	—	—	—	—	44
09/13	Look Rock	A. Hoff (2)	5.0	—	—	—	1	1	—	1	25	—	—	—	1	1f	30
09/13	Signal Pt.	K.Dubke (3)	7.0	—	—	2	1	—	—	—	2	—	—	—	1	—	6
09/14	Flagpole	B. Stedman (1)	1.7	—	—	—	1	—	—	1	1	1	—	—	—	—	4
09/14	Look Rock	A. Hoff (3)	5.5	—	—	1	—	—	—	—	112	5	1	—	1	—	120
09/14	Signal Pt.	K. Dubke (3)	10.0	—	3	2	—	1	4	—	198	—	—	—	—	1P	209
09/15	Signal Pt.	T. Patton (1)	1.5	—	—	—	—	—	—	—	5	—	—	—	—	—	5
09/16	Ooltewah	L. Dubke (1)	1.3	—	—	—	—	—	1	—	88	—	—	—	—	—	89
09/16	Signal Pt.	T. Patton (1)	1.5	—	—	—	—	—	—	—	1	—	—	1	—	—	2
09/17	Look Rock	D. Powers (4)	4.0	—	—	—	—	—	—	—	8	—	—	1	1	—	10
09/17	Thorn Hill	P. Hartigan (1)	8.7	—	—	—	—	—	—	—	706	1	2	1	1	—	711
09/18	Look Rock	A. Hoff (1)	3.3	—	—	3	—	—	—	—	2719	10	—	2	—	13r	2747
09/19	Look Rock	L. Armstrong (1)	3.7	9	—	—	—	1	—	—	150	—	—	—	—	1r	161
09/20	Bon Air	A. Bell (9)	6.0	51	1	2	—	1	3	—	173	2	—	—	1	—	234
09/20	Look Rock	A. Hoff (5)	9.0	—	—	3	1	3	1	—	95	6	1	1	1	1f, 1r	114
09/20	Sewanee	J. Peters (1)	0.8	—	—	2	1	—	—	—	9	—	—	—	—	—	12
09/20	Signal Pt.	K. Dubke (2)	9.0	—	—	14	2	—	4	—	109	—	—	2	2	1f	134
09/21	Bon Air	S. Bell (12)	7.0	—	—	2	1	—	1	—	130	—	1	1	—	—	136
09/21	Look Rock	A. Hoff (2)	4.0	—	—	2	—	—	—	—	23	—	—	1	—	1r	27
09/21	Ooltewah	L. Dubke (2)	4.5	—	—	—	—	—	3	—	26	—	2	2	—	—	33
09/21	Mt. Roos.	B. Stedman (1)	5.0	5	4	3	2	—	—	5	1013	—	—	4	—	1P	1037
09/21	Sewanee	J. Peters (1)	2.5	—	—	2	1	—	—	—	216	—	—	1	—	—	220
09/21	Signal Pt.	K. Dubke (3)	9.0	—	1	2	—	—	3	—	268	—	1	1	—	—	276
09/23	Look Rock	J. Owen (2)	3.8	6	7	8	—	1	1	—	228	—	—	—	3	—	254
09/23	Sewanee	J. Peters (2)	1.5	—	—	2	—	—	5	—	19	—	—	—	—	—	26
09/23	Signal Pt.	J. Lyons (2)	5.0	—	—	7	2	1	2	1	71	—	1	1	—	—	86
09/24	Sewanee	J. Peters (1)	0.5	1	4	2	—	—	2	—	—	—	—	—	—	—	9
09/25	Look Rock	M. Armstrong (1)	3.2	—	—	—	—	8	2	—	35	—	—	—	3	—	48
09/25	Sewanee	J. Peters (1)	1.3	—	—	—	1	—	—	—	233	—	—	—	—	—	234
09/26	Sewanee	J. Peters (1)	1.9	—	—	3	—	1	—	1	235	—	—	—	—	1P	241
09/27	Flagpole	B. Stedman (1)	4.0	—	—	3	—	1	—	—	4	1	—	—	1	—	10
09/27	Look Rock	R. Clark (3)	5.0	1	—	8	1	—	—	—	40	—	—	2	2	—	54
09/27	Sewanee	J. Peters (7)	7.8	—	—	5	1	5	—	—	970	—	—	—	—	1P	982
09/27	Signal Pt.	K. Dubke (1)	8.0	—	3	4	—	—	1	—	30	—	—	—	—	—	38
09/28	Flagpole	B. Stedman (1)	2.0	—	17	—	—	—	3	2	160	—	—	—	—	—	182

09/28	Look Rock	A. Hoff (3)	7.7	19	2	2	1	3	1	—	33	1	—	—	—	—	62
09/28	Sewanee	J. Peters (1)	3.5	—	—	1	—	8	—	—	654	—	—	—	—	1f	664
09/28	Signal Pt.	K. Dubke (1)	7.0	—	—,	4	—	—	4	—	101	—	—	—	1	—	110
09/29	Sewanee	J. Peters (1)	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	0
10/02	Sewanee	J. Peters (1)	0.8	—	—	2	2	—	—	—	—	—	—	—	1	—	5
10/03	Flagpole	B. Stedman (1)	1.0	—	—	—	—	1	—	—	9	—	—	—	—	1P	11
10/03	Sewanee	J. Peters (1)	0.8	—	—	4	—	2	—	—	45	—	—	—	1	—	52
10/04	Flagpole	B. Stedman (1)	1.0	—	—	1	—	1	—	—	10	—	1	—	—	—	13
10/04	Signal Pt.	K. Dubke (1)	8.0	—	—	3	1	—	8	—	5	—	—	—	—	—	17
10/05	Flagpole	B. Stedman (1)	2.0	—	—	2	1	3	—	—	1	—	—	—	—	—	7
10/05	Look Rock	A. Hoff (2)	6.0	—	—	22	4	16	4	3	44	2	—	2	13	2f, 5r	117
10/05	Sewanee	J. Peters (1)	1.0	—	—	—	1	8	—	—	19	—	—	—	—	3f	31
10/05	Signal Pt.	K. Dubke (2)	8.5	—	—	23	—	—	10	—	1	—	—	—	—	1BE	35
10/06	Sewanee	J. Peters (1)	1.0	—	—	7	3	7	—	—	2	—	—	—	1	—	20
10/07	Sewanee	J. Peters (1)	0.5	—	—	3	—	—	—	—	—	—	1	—	1	—	5
10/11	Look Rock	A. Hoff (1)	3.5	—	—	6	3	7	—	2	—	—	1	—	1	1r, 1M	22
10/29	Mt. Roos.	J. Wahl (1)	0.8	35	—	—	—	—	1	—	1	—	—	—	—	—	37
11/12	Mt. Roos.	J. Wahl (2)	1.0	55	—	—	—	—	—	—	—	—	—	—	—	—	55
22 days	Others[1]		54.5	102	47	18	6	7	97	7	1124	6	4	6	3	3P,1r	1373
Total			265.4	284	89	182	38	87	101	23	10,195	35	16	29	40	8P, 9f, 23r, 1M, 1BE	11,161

[1]Includes sites with single day coverage and/or low total numbers of raptors.

TABLE 2. 1986 SITE TOTALS

LOCATION	#DAYS	#HOURS	TV	BV	SS	CH	UA	RT	RS	BW	UB	NH	OS	AK	OTHER	TOTAL	TOTAL HAWKS PER HR.
Signal Pt.	15	79.5	—	7	63	6	2	36	1	817	—	2	5	4	1P, 1f, 1BE	946	11.9
Look Rock	15	67.6	35	9	56	12	44	14	6	3513	25	3	8 1M	26	4f, 22r,	3779	55.9
Sewanee Cross	15	26.4	1	4	33	10	31	7	1	2446	—	1	1	4	2P, 4f	2545	96.4
Flagpole	9	17.7	57	22	7	2	6	3	3	189	2	1	1	1	1P	295	16.7
Mt. Roosevelt	5	12.3	96	4	5	3	—	1	5	1024	—	—	4	2	2P	1146	93.2

Broadwings at Bon Air during 5 hours of watching. Numbers began to increase again on 20 September, with 697 Broadwings reported from 7 locations. On 21 September, 8 locations reported a total of 2425 Broadwings, with the highest numbers counted by Barbara Stedman at Mt. Roosevelt (1031), and by Tom Odom at Kyles Ford Fire Tower (459). The last large flights were reported on 27 September, with 6 sites reporting 1061 Broadwings (a high of 970 at Sewanee Cross by James Peters), and on 28 September (5 locations, 954 Broadwings, 654 at Sewanee Cross). Only a few stragglers were reported after this date.

Some chance sightings of Broadwings by TOS members in the Memphis area indicate a real need for organized watches to be re-started in west Tennessee. On the morning of 6 October, several groups of Broadwings were seen at three locations around Memphis, beginning at 0840 hours, when Jo Levy counted 122 hawks in 15 minutes. Carolyn Bullock counted 20 Broadwings between 0900-1100 hours, and Sue Ferguson counted 64 at 1100 hours. These sightings are all the more interesting after receiving reports of over 5,000 Broadwings moving through the St. Louis, Missouri, area on 5 October (pers. comm., Chuck Feerick, regional compiler, Hawk Migration Assoc. of N. America). During the last four years, hawkwatchers in the St. Louis area have reported large flights of Broadwings during the last week of September. Since Memphis is only about 400 kilometers south of St. Louis, the potential of seeing large Broadwing flights late in the season is good.

One hundred and one Red-tailed Hawks (*B. jamaicensis*) were reported this year (.38/hour), an increase over the last 2 years. The high daily count came on 9 October, when Michael Bierly counted 27 Redtails in 40 minutes at Old Stone Fort State Park in Coffee Co. In 1985, 36 Redtails were seen (.20/hour), and in 1984 only 16 (.07/hour) were reported. The average number of Redtails for the 5 year period of 1979-1983 was .43/hour. During these years, many Tennessee sites were manned much later in the season, with observations continuing throughout October and into November. The highest daily counts were made during this later period, which is the peak time of Redtail migration. For the last 3 years, most sites have not been manned later that mid-October. If observations were to continue into November, the Redtail total should be much higher.

The total of 23 Red-shouldered Hawks (*B. lineatus*) (.09/hour) was the highest since 1981, and tripled the numbers seen during the previous 3 years. Two observers reported a daily total of 5 Red-shoulders: Lil Dubke, at Audubon Mt. on 20 September, and Barbara Stedman, at Mt. Roosevelt on 21 September.

More accipiters were reported this year than ever before. A total of 307 accipiters was counted (1.16/hour), of which 182 were Sharp-shinned Hawks (*Accipiter striatus*) (.69/hour), 38 were Cooper's Hawks (*A. cooperii*) (.14/hour), and 87 were unidentified accipiters (.33/hour). The previous high total for Tennessee was in 1977, when 177 accipiters were counted (.75/hour), of which 142 were Sharpshins, 23 were Cooper's, and 12 unidentified accipiters. Higher than average numbers of Sharpshins were reported between 20-28 September, but the peak came after a front moved through the state on 2 October. Strong southwest winds on 5 October brought a total of 80 accipiters from 4 locations. Ken Dubke counted 23 Sharpshins that day at Signal Point, and Audrey Hoff counted 42 accipiters at Look Rock (22 Sharpshins, 4 Cooper's, and 16 unidentified accipiters).

Northern Harrier (*Circus cyaneus*) numbers equaled the average of the last 4 years. A total of 16 was reported (.06/hour); one third of these were seen on 21 September, when 4 out of 8 sites reported Harriers. The state's only Bald Eagle (*Haliaeetus leucocephalus*) was seen by Ken Dubke at Signal Point on 5 October.

Ospreys (*Pandion haliaetus*) were reported in high numbers. Twenty-nine were counted, yielding .11/hour, the highest number per hour since 1979. Eleven of these were seen on 21 September, when 7 of 8 sites reported Ospreys. Barbara Stedman counted 4 from Mt. Roosevelt that day, which was the highest daily total of the season.

Falcons were reported in record numbers this year. A total of 40 American Kestrels (*Falco sparverius*) was counted (.15/hour), the highest number in at least 25 years. The highest daily total ever for Tennessee was reported on 5 October, when Audrey Hoff counted 13 Kestrels at Look Rock. This date is later than usual for large Kestrel flights. Kestrel numbers have previously peaked at about the same time as Broadwings, in mid-September. In fact, the second highest daily total this year from all sites combined came on 20 September, when 4 of 7 sites reported a total of 5 Kestrels. The 5 October date coincides with the large numbers of accipiters counted that day, and the season's total continues the steady increase in Kestrel numbers reported over the last 5 years.

Peregrine Falcons (*F. peregrinus*) have also had a steady increase in numbers. A record high of 8 Peregrines was reported, up from the previous high of 3 counted on 1982. Both Sewanee Cross and Mt. Roosevelt had 2 Peregrines each; the remainder of the sightings were scattered throughout the state at 4 different sites. One Merlin (*F. columbarius*) was seen at Look Rock on 11 October. The only other Merlin reported was 1 seen by James Peters near Sewanee Cross on 6 October.

The number of Turkey (*Cathartes aura*) and Black Vultures (*Coragyps atratus*) reported during migration in Tennessee has varied drastically from year to year, making comparisons of yearly totals difficult. There are several problems associated with counting these raptors. One problem is the difficulty of differentiating migrating birds from those considered to be residents of the area. This can be partially resolved as each observer becomes familiar with the habits of the resident vultures at his hawkwatching site. The usual time of appearance, and numbers of birds in the resident groups, in addition to nonmigratory flight patterns (repeated low-altitude forays around the area) can be good clues as to which birds are residents. The main problem, however, is that the peak migration of vultures usually occurs later than most sites are manned, during the end of October and in November. Also, historically, the major movement has occured over a short period of time, with large numbers usually reported on only 1 or 2 days.

This year, most observers reported resident vultures throughout the season, and early movements of Turkey Vultures were reported by Barbara Stedman on 7 September at Flagpole Fire Tower (57) and by Sue Bell on 20 September at Bon Air (51). There were no other large groups reported until much later, when Joseph Wahl counted groups of 35 and 55 at Mt. Roosevelt on 29 October and 12 November, respectively. Barbara Stedman reported the largest daily total of Black Vultures (17) at Flagpole Fire Tower on 28 September.

In summary, the 1986 Autumn Hawkwatch season in Tennessee yielded high totals of most raptors, and several species were counted in record numbers. With, hopefully, the extension of observations into November, plus the addition of new sites in the middle and western parts of the state, Tennessee could provide important clues to the pathways of migrating raptors in the Southeast.

Observers: Audubon Mt.-L. Dubke. Bon Air-S. Bell. Flagpole Fire Tower-B. Stedman. Kyles Ford Fire Tower-T. Odom & family. Look Rock-L. & M. Armstrong, R. Clark, A. & R. Hoff, J. Owen, D. Powers, R. Wolfe. Mt. Roosevelt Fire Tower-R. Clark, B. Stedman, J. Wahl. Ooltewah Fire Tower-L. Dubke. Sewanee Cross-J. Peters. Signal Point-K. Dubke, J. Lyons, D. & T. Patton. Thorn Hill-P. Hartigan.

Key to species abbreviations in tables: TV-Turkey Vulture; BV-Black Vulture; SS-Sharp-shinned Hawk; CH-Cooper's Hawk; UA-unidentified accipiter; RT-Red-tailed Hawk; RS-Red-shouldered Hawk; BW-Broad-winged Hawk; UB-unidentified buteo; NH-Northern Harrier; OS-Osprey; AK-American Kestrel; P-Peregrine Falcon; BE-Bald Eagle; M-Merlin; f-unidentified falcon; r-unidentified raptor.

Corrigenda: The statement in the 1985 hawk count compilation that the 3380 Broad-winged Hawks counted at Ooltewah on 14 September was "the highest daily total ever in Tennessee" (*Migrant* 57:36, 1986) is in error. This total was exceeded in 1960, 1968, 1970, 1979, and in 1981, when the highest count of 5632 was made (*Migrant*, in litt.).

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NOTES ON HIGH ELEVATION BREEDING BIRDS OF FROZEN HEAD STATE NATURAL AREA, TENNESSEE

The first ornithologist to note the northern or "Transition Zone" affinities of the breeding avifauna of the Cumberland Mountains (as distinguished from the flatter and lower Cumberland Plateau) was A. H. Howell (1910), who visited Big Black Mountain, Kentucky, and Cross Mountain, Tennessee in 1908. Since then, publications have appeared on the birds of Big Black Mountain (Mengel 1965), and Cumberland Mountain in Cumberland Gap National Historical Park (NHP), Kentucky and Virginia (Davis *et al.* 1980), as have numerous notes on the birds of Campbell County, Tennessee (e.g. Alsop 1971, Howell and Campbell 1972). Until recently, very little fieldwork has been done on the breeding birds of Frozen Head Mountain, Morgan County, Tennessee. This mountain, located within Frozen Head State Natural Area, is significant in that, with a maximum elevation of 1014 m at the base of the fire tower, it is one of the highest peaks in the Cumberland Mountains of Tennessee. Except for 3 gaps between 872 and 902 m, areas above 914 m (3000 feet) extend for almost 9 km along the crest of Frozen Head and Bird Mountains. Furthermore, unlike most other high peaks in the Cumberlands, Frozen Head Mountain has not been disturbed by strip-mining or recent logging. This paper gives the recent status of selected breeding species of Frozen Head Mountain based on my field work and supplemented by observations of Louise F. Fuller, James M. Campbell, Betty Reid Campbell, and Edward H. Schell.

Accipiter sp.—On 4 July 1985, I observed 3 accipiters, at least 2 of which were fledglings, about 200 m N of Tub Springs Gap. The birds were flying about in the treetops, giving "kek, kek, kek" calls, but were not seen well enough to confirm their specific identity. Sharp-shinned Hawks (*Accipiter striatus*) are known to have nested near the crest of Cross Mountain (Campbell and Howell 1970), and Davis *et al.* (1980) observed Cooper's Hawks (*A. cooperii*) during June at high elevations in Cumberland Gap NHP.

Veery (*Catharus fuscescens*)—The first evidence of possible breeding by Veeries at Frozen Head was in 1982, when Fuller observed several singing on 5 and 11 June. The birds were at elevations of 854 to 915 m on Frozen Head Mountain between the upper end of the Spicewood Branch Trail and the upper end of the South Old Mac Mountain Trail. On 4 July 1985, I observed 5 Veeries singing and calling on a north slope at an elevation of between 853 and 884 m, near the upper end of the Spicewood Branch Trail. On 11 May 1986, I observed 5 Veeries, probable migrants, at low elevations, and 2 in the same area as the 1985 observations. On 9 June 1986, I observed 5 Veeries in the same area as the 1985 observations, and found 1 singing in mixed hardwood and hemlock (*Tsuga canadensis*) at an elevation of about 485 m. I do not know if this bird established a territory at this unusually low elevation. The high elevation birds occupied an area of medium to large buckeye (*Aesculus octandra*), tulip poplar (*Lireodendron tuliperifera*), black cherry (*Prunus serotina*), and northern red oak (*Quercus rubra*), with a fairly open understory made up of saplings of the same species, and a ground cover dominated by *Hydrangea arborescens*. Both Fuller and I observed Wood Thrushes (*Hylocichla mustelina*) in the same areas as the Veeries, and I observed a Wood Thrush singing at the peak of Frozen Head. Elsewhere in the Tennessee Cumberlands, Veeries have been observed on Cross Mountain at elevations above 899 m (J. M. Campbell, pers. comm.;

pers. obs.). In Kentucky, Mengel (1965) found Veeries rare between 975 and 1097 m on Big Black Mountain, and one of the most numerous birds above 1097 m. Davis *et al.* (1980) found Veeries from 884 m up at Cumberland Gap NHP.

Solitary Vireo (*Vireo solitarius*)—This species is uncommon in the Frozen Head area. My lowest breeding season observation is at about 788m.

Chestnut-sided Warbler (*Dendroica pensylvania*)—I observed 7 birds of this species on 4 July 1985, from an elevation of about 879 m up to the peak of Frozen Head. Most of the birds were along the SE slope of Frozen Head Mountain between Mart Fields and the fire tower. I observed 2 birds on 11 May 1986 and 5 birds on 9 June 1986 in the same area. Observations by Fuller, Campbell, and Campbell from Frozen Head have been within the same altitudinal range. Elsewhere in the Cumberlands, Chestnut-sideds have been found to be fairly common in areas of broken forest canopy in Campbell County as low as 813 m, and may occupy territories as low as 640 m (Nicholson 1980). The southern limit of their range in the Tennessee Cumberlands appears to be on Hinch Mountain, Cumberland County (Hamel in prep).

Black-throated Blue Warbler (*Dendroica caerulescens*)—The only location in the Tennessee Cumberlands where this species is known to breed is on Frozen Head Mountain, where they were first observed by Fuller on 3 June 1982. She saw 1 bird at an elevation of about 762 m on the North Old Mac Mountain Trail. In 1983, Larry Pounds (pers. comm.) observed a pair which appeared to have a nest or fledglings nearby. On 4 July 1985, I observed 6 birds, including a female flushed from a *Hydrangea* thicket, all within 2 km SW of the peak of Frozen Head and between 853 and 914 m elevation. I observed 8 Black-throated Blue Warblers on 11 May 1986, and 11 on 9 June 1986 in the same general area as the 1985 observations. The 9 June observations included a pair giving a distraction display at an elevation of about 788 m, and a short-tailed fledgling at an elevation of about 848 m. The fledgling, located a short distance below the junction of the Spicewood Branch and Boundary Trails, was fed by an adult male 4 times in 5 min. The food items were small (<2.5 cm long) green lepidopteran larvae. The fledgling was silent except when the adult approached within about 1 m of it, when it gave a rapid series of sharp chips. The Black-throated Blue Warblers occupied habitat similar to that described above for Veeries and some were in close proximity to Veeries. On 8 August 1983 Schell observed a male at 721 m elevation on Big Cove Branch, Bird Mountain. The only previous record of possible breeding Black-throated Blue Warblers from this region is that of Howell (1910), who collected 2 males on 15 and 17 August 1908 at 1036 m elevation near the peak of Cross Mountain, and noted that they probably bred on the mountain. Both birds were of the southern Appalachian subspecies *D. c. cairnsi*. Since then, this area has been strip-mined extensively, and habitat for this species on Cross Mountain is limited (Campbell, pers. comm.; pers. obs.). A nest record also exists from the Savage Gulf area, Grundy County, where Ganier (1923) collected a nest and eggs on 26 May 1922. Aside from this nesting pair, Ganier observed no other Black-throated Blue Warblers, and no recent nesting records exist from this area. In Kentucky, the species has been found as low as 732 m in Cumberland Gap NHP (Davis *et al.* 1980), and is common above 914 m on Big Black Mountain and in Letcher County (Mengel 1965).

Yellow-throated Warbler (*Dendroica dominica*)—I observed a single bird at the Frozen Head fire tower on 4 July 1985. This bird was foraging in apple (*Malus sp.*) and black locust trees (*Robinia pseudoacacia*), and did not sing. This species is found regularly at low elevations in Frozen Head SNA (Campbell, pers. comm.; pers. obs.) and the bird at high elevation was probably wandering after breeding.

Cerulean Warbler (*Dendroica cerulea*)—Although this species is not exclusively found at high elevations, the Frozen Head area has the densest Cerulean Warbler population I have ever observed. The species is found throughout the elevational range of Frozen Head Mountain. On 11 May, I counted 40 singing birds, and on 9 June, partly during rain, I counted 38 singing birds along 8.3 miles of the Spicewood Branch and Chimney Top trails. Comparative counts of other commom species along the same trails, made on 9 June, are Red-eyed Vireo (*V. olivaceus*), 59; American Redstart (*Setophaga ruticilla*), 40; Ovenbird (*Seiurus aurocapillus*), 58; and Hooded Warbler (*Wilsonia citrina*), 27. Confirmed evidence of Cerulean Warbler breeding consists of my observation of a male carrying food into the canopy of a black locust (*Robinia pseudoacacia*) at the edge of a blowdown at an elevation of about 700 m on 9 June 1986, and a pair feeding fledglings on 6 July 1986 along TN 116 at an elevation of about 576 m.

Canada Warbler (*Wilsonia canadensis*)—On 5 June 1982, Fuller observed a male of this species singing along the South Old Mac Mountain Trail at an elevation of about 860 m, 0.75 km NW of the fire tower. On 4 July 1985, I observed a pair about 350 m WSW of the Frozen Head fire tower at an elevation of about 930 m. These birds were on a NW slope, with a canopy of black locust, black cherry and northern red oak, and a very thick *Hydrangea* understory. Both birds were carrying food, giving agitated chip notes, and appeared to have either nestlings or fledglings nearby. The male did not sing while it was being observed. A Hooded Warbler sang in the same area and a Black-throated Blue Warbler was less than 100 m away. I again observed evidence of Canada Warbler breeding in 1986. On 11 May, I observed 6 birds, including an agitated pair at elevation of about 833 m along the Spicewood Branch trail. My lowest observation on that date was at about 679 m. On 9 June, I observed 3 adults, which included a male chipping and carrying food at the location of the pair on 11 May. This was the lowest observation on 9 June. These observations are the only evidence of breeding by Canada Warblers in the Tennessee Cumberlands. At Big Black Mountain, Canada Warblers are one of the 2 most numerous warblers and occur down to about 967 m (Mengel 1965). At Cumberland Gap NHP, Davis *et al.* (1980) found the Canada Warbler in *Rhododendron* at elevations of 914 m or higher, but also as low as 732 m along a creek.

Rose-breasted Grosbeak (*Pheucticus ludovicianus*)—On 11 May 1986, I observed 12 Rose-breasted Grosbeaks at or above an elevation of about 885 m, and on 9 June 1986 I observed 9 birds in the same area. My only actual evidence of breeding is from 11 May, when I saw a pair building a nest at an elevation of 921 m on the NE slope of Chimney Top. I first noticed the female with a root or twig in her beak at about 1100. The bird called several times, and then was silent and I lost sight of her. Shortly after that I saw a nest under construction in a yellow poplar, about 11 m above ground on a slightly upward-sloping branch about 2.4 m from the trunk. The branch was about 1.3 cm in diameter at the nest. I watched the birds about 35 min, and

they visited the nest at 1105 and 1125. After the 1105 visit, both birds flew from the nest area. The female returned at 1115 carrying a vine about 3 cm long in her beak. She called for several minutes from a tree adjacent to the nest tree, then flew to the outer end of the branch on which the nest was located, and called there for a couple minutes. At about 1125 she added the vine to the nest and flew off. The male was singing a short distance away during this period. On 9 June, I watched this nest for 20 min during a light rain. I did not see any grosbeaks at the nest, which appeared intact, but heard grosbeaks calling in the area. These observations are the first documented evidence of Rose-breasted Grosbeaks nesting in the Tennessee Cumberlands. The species, however, is fairly common on Cross Mountain, and has been reported as low as 640 m (Howell and Campbell 1972). It occurs on several other peaks in the Tennessee Cumberlands as far south as Hinch Mountain (Hamel in prep.). Mengel (1965) reported this species to be fairly common at elevations above 914 m in Harlan and Letcher Counties, Kentucky, but it is not known from Cumberland Gap NHP (Davis *et al.* 1980).

One other high elevation species known to breed elsewhere in the Cumberlands, the Blackburnian Warbler (*D. fusca*), has not been yet reported from Frozen Head. The Blackburnian Warbler has occasionally been found during the breeding season on the slope of Cross Mountain (Howell and Campbell 1972), but does not appear to breed there regularly. It is common above 848 m elevation on Big Black Mountain (Mengel 1965), but is not known from Cumberland Gap NHP (Davis *et al.* 1980). The absence of this species at Frozen Head is unexplained, as suitable habitat appears to be plentiful.

Acknowledgements: I am indebted to Edward Schell, Louise Fuller, and James and Betty Reid Campbell for kindly sharing their observations with me, and to Paul Hamel for critical comments on an early draft of the manuscript.

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NOTE ADDED IN PROOF — I conducted additional field work in the northern part of Frozen Head during May and June, 1987, and obtained breeding evidence for many species. Following are notes on selected species.

Solitary Vireo—I found 3 nests of this species on 31 May 1987. One was along North Old Mac Trail at an elevation of about 610 m and contained 4 large young being fed by adults, and another, with an adult incubating 4 eggs, was along the same trail at about 854 m elevation. The other nest was at about 914 m elevation and contained 2 eggs and 2 large young, 1 of which flew from the nest as I examined it.

Black-throated Blue Warbler—On 31 May 1987, at an elevation of about 884 m along North Old Mac Trail a short distance below its junction with the jeep road, I observed a fledgling, identified by its greenish color and white wing spot. Although I did not see it being fed, agitated adults were nearby. The male adult perched near the fledgling, and the female gave a distraction display. This was more than a week earlier than my 1986 observation of a Black-throated Blue Warbler fledgling, and indicated that this species begins nesting activities shortly after its April arrival.

Blackburnian Warbler—On 11 May 1987, I observed 11 singing birds, and on 31 May, I observed 13 singing birds, along North Old Mac Trail and the jeep road, at elevations between 793 and 945 m. I believe these birds were territorial. On 27 June 1987, I observed a pair of adult Blackburnian Warblers feeding at least 2 fledglings in the canopy of a large yellow poplar along the jeep road at about 823 m. I was first attracted to these birds by the begging calls of the fledglings. I did not hear any songs of this species on 27 June. — CHARLES P. NICHOLSON.

MINUTES OF THE 1987 ANNUAL BOARD OF DIRECTORS AND BUSINESS MEETINGS

The 72nd Annual Meeting of the Tennessee Ornithological Society was held 1-3 May, 1987, at the Holiday Inn I-40 East, Memphis, Tennessee. The TOS Board of Directors meeting was called to order by President James Ferguson at 1310 on 2 May. Copies of the minutes of the October 1986 meeting and December 1986 special called meeting were distributed and approved as printed.

REPORTS OF OFFICERS

The VICE PRESIDENTS for West and Middle Tennessee were absent and sent no reports. VICE PRESIDENT for East Tennessee Lil Dubke reported on the activities of the Chattanooga and Lee Herndon chapters. Dan Nieves from Greeneville and Marcia Davis from Knoxville reported for their chapters.

CURATOR James Tanner reported that back issue sales of *The Migrant* have brought in $9.53, and that Linda Fowler has donated her records and compilations of hawk migrations in Tennessee to TOS.

The EDITOR of *The Migrant*, Charles Nicholson, reported that *The Migrant* is back on schedule and solicited manuscripts. There was no report from the SECRETARY, and the DIRECTORS-AT-LARGE were absent.

TREASURER George Payne reported that from 1 October 1986 to 2 May 1987, the Society had income of $11,079, expenses of $4,539.55, a capital reserve of $41,764.40, and that a report of the audit will be sent to the new President.

REPORTS OF COMMITTEES

BREEDING BIRD ATLAS Chairperson Paul Hamel reported good progress. A committee meeting was held in February 1987, and a newsletter edited by Donna Smith has been printed and distributed. Charles Nicholson has agreed to serve as Editor-in-Chief of the Atlas book, and Stephen Stedman will edit the newsletter in the future.

CERTIFICATION Chairperson Charles Nicholson reported a meeting of the committee in February and one to be held 2 May. The committee is working on an updated state bird list.

EDITOR SEARCH Chairperson James Tanner listed the other committee members, Lula Coffey, Glen Eller, Ken Dubke, and Katherine Goodpasture. The committee recommended Fred Alsop as Editor of *The Migrant* upon the resignation of Editor Nicholson in May 1988. Paul Hamel moved acceptance of the report, which was seconded and passed.

CONSERVATION/EDUCATION Chairperson Ken Dubke reviewed the activities of the past 2 years and expressed hope that we will follow through on commitments. He suggested that TOS undertake a state-wide Barn-Owl census. The President thanked Chairman Dubke for his excellent work on this committee.

FINANCE Chairperson Richard Taylor reported that he is studying the possibility of putting some TOS funds into more productive investments, and that TOS should consider using earnings from these funds. A motion was passed to approve the Finance Committee consisting of Richard Tay-

lor, Audrey Hoff, William Whitley and George Payne *ex officio*, which will audit the books.

NOMINATING Chairperson Ann Tarbell presented the slate of officers and directors recommended by her and other committee members Dollyann Daily and Paul Harris. On a motion by Ron Hoff, the following slate was approved: Vice President, East Tennessee, Audrey Hoff; VP, Middle Tennessee, John Ellis; VP, West Tennessee, Helen Dinkelspiel; Secretary, John Robinson; Treasurer, George Payne; Curator, James Tanner; Editor of *The Migrant*, Charles Nicholson; Director-at-Large, East Tennessee, Dee Eiklor; DAL, Middle Tennessee, Robbie Hassler; DAL, West Tennessee, Donna Louise Ward.

There was no report on Patches and Decals from Robbie Hassler. Editor of *The Tennessee Warbler* William Bean was absent and sent no report.

OLD BUSINESS

CONSTITUTION REVISION COMMITTEE Chairperson Nelle Moore listed the other members of this committee: Frederick Carney, Thomas Guschke, Lil Dubke, Stephen Stedman, and James Ferguson *ex officio*. President Ferguson presented the proposed revisions and rearrangements recommended by the committee article by article, following which the Directors, on a motion by Ron Hoff, approved said revisions with minor modifications.

Then President Ferguson presented amendments which had been proposed by various members of the committee. Revised Article II, Sec. 1 as passed will read: "The membership shall consist of Active, Family, Sustaining, Life, Honorary, and Student Members, actively engaged in the study of ornithology in Tennessee or otherwise interested in the bird life of Tennessee." This eliminates the requirement of residency in Tennessee and the membership category "Corresponding", and it adds the membership category "Family" to the Constitution. This amendment also deletes old Article II, Sec. 2, 4 and 5. The new Article II, Sec. 2: "Family memberships are available for couples, or parents and their children under eighteen years of age", was passed. A motion to include in Article VII, Sec. 3, that each adult of a Family membership would have one vote, was defeated. A motion was passed to add to new Article VII, Sec. 5 to read: "The rules contained in the current edition of "Robert's Rules of Order Newly Revised" shall govern the Society in all cases to which they are applicable, etc."

NEW BUSINESS

FORAY Director Paul Hamel announced that 2 forays will be held this year, and they will be in the Breeding Birds Atlas format. The Henry County Foray with headquarters at Paris Landing State Park will be 22-25 May, and the Bledsoe County Foray will be 19-21 June with headquarters at Pikeville.

FALL SYMPOSIUM Director Stephen Stedman announced that the Buffalo River Chapter will host the 1987 Fall Meeting at Lawrenceburg on 13-15 November, and he asked for papers to be submitted.

A RESOLUTION encouraging the purchase of House Mountain for the establishment of a State Natural Area or a day-use State Park was introduced by Marcia Davis and adopted.

Following announcements that the 1988 Spring Meeting will be held in Middle Tennessee, location not yet set, and of meetings of the Finance and Atlas Committees, the meeting adjourned.

ANNUAL MEETING

The 72nd Annual Meeting of the TOS was opened by Memphis Chapter President George Payne following the banquet on 2 May. One hundred and forty-one members and guests attended. President Payne introduced those at the head table, thanked Memphis Chapter members for their work on meeting preparations, and made announcements concerning field trips.

TOS President Ferguson introduced James Tanner and George Mayfield who related the accomplishments and careers of Ben B. Coffey, Jr. and Lula C. Coffey, naming them "General Ramrod of Birding in Memphis" and "First Lady of TOS" respectively. President Ferguson surprised the Coffeys by presenting them with a sculptural representation of them by artist Ellen McGowan as a gift from the Memphis Chapter, for which the Coffeys expressed appreciation.

President Ferguson called the roll of TOS chapters and members-at-large, and each group stood and was recognized. He then made a report on the Board of Directors meeting. He noted that the Endowment Funds are over $40,000; that the Editor Search Committee has recommended Fred Alsop as Editor of *The Migrant* following Charles Nicholson's resignation in May 1988; that a resolution was passed supporting the state acquisition of House Mountain; and the places and dates of the 1987 Forays and Fall Meeting. He presented the Board's recommendations on Constitution Revisions and Amendments, which were accepted on a motion by Lil Dubke. Nomination Committee Chairperson Ann Tarbell presented her committee's slate of officers and directors-at-large which were recommended by the Board, and which were elected on a motion by Robert Ford.

President Ferguson expressed his pleasure in serving as President and presented the gavel to incoming President Stephen Stedman.

Ben Coffey introduced Guest Speaker John P. O'Neill, Coordinator of Neotropical Studies and Artist in Residence at Louisiana State University, who related his experiences in ornithological research in South America with a slide presentation of "The Andes, Tepuis and Birds". Following this address the meeting adjourned.

CAROLYN H. BULLOCK, Secretary

ROUND TABLE NOTES

COMMON GROUND-DOVE SPECIMEN FROM WEAKLEY COUNTY, TENNESSEE—In late October or early November 1984 (exact date unknown), a Common Ground-Dove (*Columbina passerina*) was killed when it flew into a window of the home of Mr. and Mrs. Charles Prince 3 miles west of Martin, Weakley County, Tennessee. Shortly after it died the bird was frozen. Several months later I was told about the bird. The skin is now in the University of Tennessee at Martin bird collection (No. 406). While there are other Tennessee records of Common Ground-Doves, including some documented by photographs (Patterson 1969, Ledbetter 1976), this is apparently the first preserved specimen from Tennessee. The bird weighed 41.3 g when prepared on 5 September 1985; this was probably near its live weight as the bird did not appear to have dried while frozen. A small amount of fat was present on the skin; no fat was present in the breast region. The specimen was a male, apparently an adult; the testes were approximately the same size (3 x 1.5 mm). One small seed (approximately 1 mm in diameter) was in the crop and 5 similar seeds were in the ventriculus.

Except for the June 1895 record of Rhoads (1895) from Roane County, other published Tennessee ground-dove records were in late fall or early winter (Patterson 1969, Ledbetter 1976, Parmer 1985, Stedman 1986, Waldron 1986). Recent records from Illinois (Kleen 1980a, Peterjohn 1982), Indiana (Peterjohn 1983), and Missouri (Kleen 1980b) were likewise from fall and early winter. Vaiden (1952) noted that 3 fall and winter specimens from central Mississippi were not the Gulf Coast breeding form, *C. p. passerina*, but were the western subspecies *C. p. pallescens*. The A.O.U. Checklist (1957) states that the western form shifts southward and eastward in winter. If the Tennessee records are of the western form, this would explain why most Tennessee records are from the western part of the state.

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GOLDEN-CROWNED KINGLET NEST ON ROAN MOUNTAIN, NORTH CAROLINA/TENNESSEE — In eastern North America, Golden-crowned Kinglets (*Regulus satrapa*) breed southward in the Appalachian Mountains to eastern Tennessee and western North Carolina (A. O. U. 1983). Their preferred nesting habitat within this region is high elevation spruce-fir forest (Simpson 1976), such as found on Roan Mountain, Carter County, Tennessee — Mitchell County, North Carolina. Although the Golden-crowned Kinglet is a fairly common resident of the Canadian zone in these mountains, and despite several accounts of young birds (Burleigh 1941, Murray 1946, Stupka 1963 *et al.*), I am aware of only two actual nest records in these two states. Simpson (1972) reported a nest found 11 June 1951 near the Highlands Biological Station in Macon County, North Carolina. Fred Alsop observed adults carrying food to young in a nest on 17 June 1980 and seven fledged young above the nest on 20 June at Carver's Gap on Roan Mountain (Eller 1980).

On 7 July 1982, while walking along the Appalachian Trail between Carver's Gap and Roan High Knob on Roan Mountain, I heard kinglet call notes and young birds begging for food. Upon investigation, I saw two adult Golden-crowned Kinglets feeding several young still in the nest. The nest tree was just barely on the North Carolina side of the mountain at approximately 1720 m elevation. Later that day, on the Tennessee side, I saw another pair feeding five fledglings.

Ed Schell and I returned to the nest site on 16 July and, after seeing the adults with about six or seven fledglings nearby, climbed to and examined the nest. The nest was 9.5 m above the ground in a Red Spruce (*Picea rubens*) about 12 m tall. Made mostly of mosses and lichens, with a deep cup and overhanging rim, the nest was suspended beneath the dense foliage near the end of a branch, 1.4 m out from the trunk. The placement and materials made the nest very difficult to see from the ground or above. These conditions undoubtedly contribute to the paucity of nest records in the region.

My thanks to Eloise Potter for providing information on North Carolina breeding records of this species.

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Accepted 12 November 1986.

NESTING HABITAT OF WILLOW FLYCATCHER IN TENNESSEE —Although Tennessee field observers have come to expect that Willow Flycatchers (*Empidonax traillii*) will be found nesting only in willow-dominated wetlands with stagnant water, the species nests in other habitats as well throughout the remainder of its range, and it appears to utilize these habitats occasionally in Tennessee also. Typically, this flycatcher may be found in "dry upland pastures thickly overgrown with . . . shrubs, in dense roadside growth, and along streams and lake edges in grassland areas" (S. B. Laughlin and D. P. Kibbe, 1985. The Atlas of Breeding Birds of Vermont, Univ. Press of New England, Hanover, p. 178). Other references describe these habitat preferences in similar terms.

Recently, I have found this species using each of the first two types of habitats mentioned in the source cited above, although I find no mention of its breeding in them in the literature devoted to Tennessee's ornithology. On 17 May 1986 I detected a male of this species singing in an overgrown portion of a pasture on Del Rio Pike in Williamson County. The bird was also present on 23 May, 29 May, and 2 June 1986. It sang territorially on each of those dates. It was not seen after 2 June 1986, although several visits to the area were made.

The trees which dominated the overgrown part of the pasture, consisting of an area of about 1 ha, were mainly osage orange (*Maclura pomifera*) and plum (*Prunus* sp.), varying in height from 3 to 6 m and appearing to be 5 to 10 years old. Dense growths of Japanese honeysuckle (*Lonicera japonica*) and common blackberry (*Rubus allegheniensis*) covered the ground. The Willow Flycatcher sang near the top of the osage orange and plum trees. The closest nearly stagnant water occurred beside a small, sluggish stream which bordered the pasture; this stream was vegetated mainly with black willows (*Salix nigra*) and ash (*Fraxinus* sp.), averaging 12-15 m in height. The flycatcher did not occupy this habitat at any time it was under observation.

On 25 May 1986 Damien J. Simbeck and I were censusing birds in Celina, Clay County, when we found a singing Willow Flycatcher in the back yard of a home near the edge of town. The bird sang from a hedge of very dense shrubbery near the road; a very small, densely vegetated stream ran through the yard close to the area used by the flycatcher. We noted a nonsinging bird, probably the mate of the singing bird, foraging in the vicinity of this site on this date, and we also observed another nonsinging bird at a site with similar habitat about 1 km away; although we could not be absolutely certain that either of the latter two birds were Willow Flycatchers, we felt reasonably certain that they did belong to that species. The date on which these birds were observed suggests that they were probably breeding individuals, although it is possible that they were late migrants.

Tennessee field workers are encouraged to search for Willow Flycatchers

in habitat other than that which has been traditionally assigned to them by experience of the past 30 years. This species' habitat requirements are flexible, and it will utilize breeding sites which have perhaps been overlooked in the past.

I am indebted to Paul B. Hamel and David F. Vogt for identification of the plants at the Del Rio Pike site.

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SUMMARY OF RECENT BROWN CREEPER OBSERVATIONS IN WEST TENNESSEE — Brown Creepers (*Certhia americana*) are common winter residents across Tennessee, but breeding season records are rare outside the eastern mountains. There has, however, been some speculation the species is extending its range south (Chriswell, *Migrant* 50:81-82, 1979). One of the earliest summer records from west Tennessee comes from Reelfoot in 1937 (Pickering, *Migrant* 8:50, 1937). It was not until 1976, however, that a nest was found west of the mountains in Davidson County (Bierly, *Migrant* 49:86-87, 1978). Three years later, in 1979, a nest was found near Roellen in Tigrett Wildlife Management Area in Dyer County (Chriswell, *op. cit.*). This is apparently the only nest record for west Tennessee to date. Other records for west Tennessee are rare and generally involve singing males.

During 1985 and 1986, I participated in a survey of breeding birds in bottomland and swamp forests in west Tennessee. Brown Creepers were found on 5 of 60 sites in the study sponsored by the Tennessee Department of Conservation. The species was found on 2 locations during the spring and summer of 1985. A male was observed singing 10 May and 20 June 1985 in the "Old Cranetown" area of Reelfoot Lake in Lake County. Another male was heard singing north of the Middle Fork Obion River, southeast of Como, in Henry County on both 1 June and 7 July 1985. Time did not permit extensive observations at either location.

Brown Creepers were found at the same locations during the 1986 breeding season. On both areas, the 1986 observations were made within 100 m of the 1985 sightings. A male was observed singing in "Old Cranetown" in Lake County on 14 May 1986. On a return visit 20 June, I was watching a male sing and forage when another male sang from 30 m away. This is the only site where 2 different males were positively identified. On the Henry County site, a male was observed singing on 23 May and 23 June 1986.

Brown Creepers were found at 3 additional locations in 1986. One individual was seen north of Rossville in the Wolf River bottoms of Fayette County on 1 May 1986. This individual did not sing during several minutes of observation. On a return visit 17 June, I found 2 individuals 30 m from the spot of the May observation. They were foraging approximately 1 m apart on a tupelo (*Nyssa aquatica*). At one point the lower individual flew up to the first and fluttered there briefly before returning. Both faced each other with bills open. They then repeated the procedure. Neither one sang during the observation. I interpreted the action to be an adult feeding young, but could not distinguish differences in plumage between the birds. No nest was found.

Another individual was observed singing on 5 May and 12 June 1986 on

the South Fork Forked Deer River, north of Jackson and west of Hwy. 20 in Madison County. The observations on these dates were 300 m apart. This was the greatest distance between observations on successive dates. I could not determine whether the same individual was observed on both occasions. The last location with a Brown Creeper was near Round Pond in Meeman-Shelby Forest Wildlife Management Area in the Mississippi River bottoms of Shelby County. One male was observed singing on one date only, 5 July 1986.

The 1985-1986 records show a surprisingly wide distribution and mark the southernmost occurrence of the species in the state in the breeding season. The observations were all made with 10 x 50 binoculars, at a distance of no more than 25 to 30 m. On each site, an individual was observed within 15 m at least once. The distinctive song was heard on all the sites except one. These records, combined with past observations, establish a breeding season record on every major Mississippi River tributary in west Tennessee except the Loosahatchie.

These observations share several common features. All were over permanent water 0.5-1.0 m deep. At 4 sites, extensive beaver damage had caused shredding and peeling bark, creating ample nesting locations. The Eastern Bluebird (*Sialia sialis*) was a common associate on these 4 sites. The similarities among these observations suggest several interesting hypotheses concerning the species and its breeding habitat requirements in the lower Mississippi Valley. My studies of habitat requirements of Brown Creepers in west Tennessee will continue. I will, therefore, appreciate any records of the species outside the eastern mountains in the breeding season.

I would like to thank Chuck Nicholson and Paul Hamel for many helpful comments on a draft of this report.

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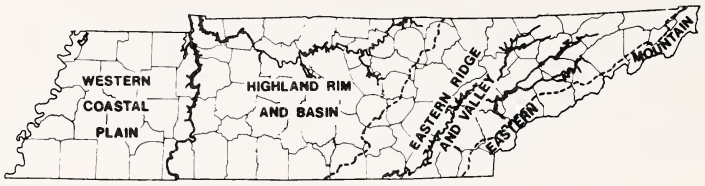
THE SEASON



WINTER: 1 DECEMBER 1986 - 28 FEBRUARY 1987

This winter was mild. No significant snow fell until 22 January, when several inches fell in east Tennessee. Shortly after this, an icestorm glazed northern middle Tennessee. Total precipitation was below average in middle Tennessee, average in west Tennessee, and slightly above average in east Tennessee.

Several northern invasive species were present, although in moderate numbers. Red-breasted Nuthatches were present in low numbers in east and middle Tennessee and apparently absent from west Tennessee. Pine Siskins and Evening Grosbeaks were present statewide for much of the season, with numbers increasing toward the end of the period. Rough-legged Hawks were reported in average or slightly below average numbers in middle Tennessee. Outside this region, there was only one Rough-legged report, from Memphis. Two goshawks were reported from the eastern mountains. American Tree Sparrows were only reported from middle Tennessee. Undoubtedly the most exciting invader was the Snowy Owl which spent part of the winter in Stewart County.

Undoubtedly due to the mild weather in the late fall and early winter, this was a good season for lingering species. Especially notable was an *Empidonax* flycatcher near Nashville. Sandhill Cranes wintered in record high numbers in the Hiwassee Island area. Other lingering species included a Lesser Yellowlegs, Common Nighthawks in east and middle Tennessee, House Wrens, an Orange-crowned Warbler (2nd winter at site), and Lincoln's Sparrows. American Robins and Eastern Bluebirds were present in high numbers in parts of the state. Some species, including Ruby-crowned Kinglets and Yellow-rumped Warblers, were present in lower than expected numbers.

Results of the midwinter eagle survey are in Table 1. This information was gathered by various agency personnel and TOS members between 5 and 13 January. — CHARLES P. NICHOLSON.

Abbreviations used in the following reports include: ad - adult; CBC -Christmas Bird Count; EOP - end of period; imm - immature; max - maximum count during period.

WESTERN COASTAL PLAIN REGION — This area had unseasonably warm temperatures with just a few very cold days and normal precipitation. The season had some unexpected visitors, among them a Northern Sawwhet Owl and a pair of Cinnamon Teal. Both of these were second occurrences for West Tennessee. Finches, Pine Siskins and Evening Grosbeaks were common visitors at feeding stations.

TABLE 1. 1987 MID-WINTER EAGLE SURVEY

	Bald Eagle				Golden Eagle
	Adult	Imm.	Unk.	Total	
West Tennessee					
Reelfoot Lake	115	50	-	165	-
Chisholm Lake	1	-	-	1	-
Open Lake	1	-	-	1	-
Tennessee NWR	21	23	1	45	3 ad.
Pickwick Reservoir	8	3	-	11	-
Pickwick Tailwater	3	-	-	3	-
Totals	149	76	1	226	3
Middle Tennessee					
Land-Between-the-Lakes	7	11	-	18	1 ad.
Barkley Reservoir	1	-	-	1	-
Cross Creeks NWR	4	-	-	4	-
Cheatham Reservoir	2	-	-	2	-
Woods Reservoir	3	1	-	4	-
Cannon County	-	-	-	-	1 ad.
Cordell Hull Resv.	4	-	-	4	1 ad., 1 imm
Center Hill Resv.	2	-	-	2	-
Dale Hollow Resv.	26	5	1	32	3 ad.
Totals	49	17	1	67	7
East Tennessee					
Norris Reservoir	2	-	-	2	-
Cherokee Resv.	-	1	-	1	-
Fort Loudoun Resv.	1	-	-	1	-
Watts Bar Lake	8	-	20	28	-
Chickamauga Resv.	9	2	-	11	-
Nickajack Resv.	-	-	-	-	-
Douglas Reservoir	1	-	-	1	-
Totals	21	3	20	44	-
GRAND TOTALS	219	96	22	337	10

Loon — Ruddy Duck: Common Loon: 16 Jan (3) PAP (JCR). Pied-billed Grebe: 16 Jan (16) PAP (JCR). Horned Grebe: 16 Jan (156) PAP (JCR), max. Black-crowned Night-Heron: 26 Dec (1 ad) Coro Lake, SBC (GBB). Great Blue Heron: 16 Jan (133) PAP (JCR), max. WHITE PELICAN: 3 Dec (2) Robco Lake, SBC (DPB, DAD, JRW, MGW); 65 during Dec at OPL (Bennie Morris). CINNAMON TEAL: 15 Jan (pair shot) SBC TN/Crittendon Co. Arkansas border (Robert Tapley, *fide* BBC). Gadwall: 16 Jan (500) BSU (JCR). Canvasback; 16 Jan (1232) BSU (JCR). Common Goldeneye: 24 Jan (114) PLS (JCR), max. Bufflehead: 16 Jan (70) BSU (JCR), max. Hooded Merganser: 16 Jan (75) BSU (JCR), max. Ruddy Duck: 10 Jan (1000) Robco Lake, SBC (BCC, LCC), max.

Eagle — Tern: Bald Eagle: 10, 11 Jan (1 ad), 13 Jan (0) Cold Creek, LDC, 2 imm at OPL (BCC, LCC, Bennie Morris); 5 Feb (0) at Cold Creek, OPL (DPB, CHB, MGW); 5 Feb (297 - 175 ad, 122 imm) Lake and Obion Cos., highest number since 1984 when 215 were counted (Wendell Crews). Sharp-shinned Hawk: 21 Dec (1 each by 3 parties) MEM CBC (*fide* BBC). Cooper's Hawk: 16 Jan (1) MEM (Kyle Anderson); 21 Feb (1) FYC (MGW). Harlan's Hawk: 14 Dec (1) PEF (JRW). Krider's Red-tailed Hawk: 23 Feb (1) PEF (JRW). Rough-legged Hawk: 21 Dec (1) MEM CBC (Helen B. Dinkelspiel). Golden Eagle: 11, 16 Jan, 16 Feb (1) BRF (CJP, JCR, TJW). Merlin: 21 Dec (1 each by 2 parties) MEM CBC (BBC). American Coot: 24 Jan (1900) PLS (JCR), max. Killdeer: 21 Dec (486) MEM CBC (*fide* BBC). Lesser Yellowlegs: 14 Feb (1) LKC (JCR). Least Sandpiper: 11, 18 Jan (5) BRF (CJP, JCR, TJW); 14 Feb (1), 16 Feb (3) BRF (JCR). Dunlin: 2 Jan (3) BRF (AHH, NRH); 16 Jan (1) BRF (JCR). American Woodcock: 7-22 Feb (1-2 males displaying at 3 locations) MEM (James A. Ferguson, Sue C. Ferguson). Bonaparte's Gull: 16 Jan (45) PAP (JCR), max. Ring-billed Gull: 13 Dec (138) Ensley Sewage Lagoons, SBC (DPB, DAD, JRW, MGW); 14 Dec (285) PEF (JRW, MGW). Forster's Tern: 16 Jan (1) PAP (JCR).

Owl — Grosbeak: NORTHERN SAW-WHET OWL: 1-21 Dec (1) MEM (*fide* MGW). Eastern Phoebe: 2 Jan (2) BRF (AHH, NRH); 1 Feb (1) Tigrett WMA, 14 Feb (3) REL (JCR). Purple Martin: 8 Feb (1) MEM (JRW). Tree

Swallow: 20 Dec (1) REL (Harold Elphingston, BBC, LCC). Fish Crow: 13 Jan (165) LDC (BBC, LCC); 15 Feb (112) LDC (JCR). Loggerhead Shrike: 21 Dec (18) MEM CBC (*fide* BBC). Pine Warbler: 16 Jan (1) West Sandy WMA (JCR); 31 Jan (1) PLS (AHH, EJW). Palm Warbler: 14 Feb (1) PEF (JRW). Common Yellowthroat: 1 Feb (1) Tigrett WMA, 14 Feb (1) REL (JCR). Vesper Sparrow: 14 Dec (19) PEF (JRW), max. Savannah Sparrow: 21 Dec (220) MEM CBC (*fide* BBC), higher than normal. LeConte's Sparrow: 15 Feb (4) LDC (JCR). Lincoln's Sparrow: 2 Feb (1) White Oak Swamp, Hardin Co. (PBH). Lapland Longspur: 20 Dec (3) LKC (JCR). Rusty Blackbird: more common than usual in SBC area (*fide* BBC). Brewer's Blackbird: 1 Feb (2) OBC (JCR). Pine Siskin: uncommon to rare, slight movement near end of season (BBC). Evening Grosbeak: 14-19 Feb (5) MEM (Jean Myers).

Locations: BRF - Britton Ford, Tenn. Nat. Wildl. Refuge, Henry Co.; BSU -Big Sandy Unit, Tenn. Nat. Wildl. Refuge, Henry Co.; LDC - Lauderdale Co.; LKC - Lake Co.; MEM - Memphis, Shelby Co.; OBC - Obion Co.; OPL - Open Lake, Dyer Co.; PAP - Pace Point, Tenn. Nat. Wildl. Refuge, Henry Co.; PEF Shelby Co. Penal Farm; PLS - Paris Landing State Park, Henry Co.; REL -Reelfoot Lake, Lake/Obion Cos.; SBC - Shelby Co.

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HIGHLAND RIM AND BASIN REGION — Winter was warm this year in the region; accumulations of frozen precipitation were rare, the most significant being the "ice storm" which glazed the northern half of the region 24-28 January. Rainfall during the season was below average: in Nashville 3.31 inches fell during December (1.30 inches deficient); 1.52 during January (2.97 deficient); and 3.20 during February (0.67 deficient).

The birdlife of the region responded to the warm conditions in a manner hard to characterize. Some semihardy species were reported in higher than normal numbers (e.g., Bewick's Wren), while others (e.g., Ruby-crowned Kinglet) were clearly down in numbers. Some species indicative of a warm winter were present (e.g., Sora, Virginia Rail, Sedge Wren, and Marsh Wren), but others went entirely unreported (e.g., Green-backed Heron and Common Yellowthroat). Northern invaders were generally not present in high numbers, but nearly all the species characteristic of an invasion winter appeared in the region at some point during the season, including American Tree Sparrow and Red Crossbill. Some common wintering species were reported in much higher than normal numbers (e.g., Common Snipe); others were inexplicably down in numbers (e.g., Yellow-rumped Warbler). Among common permanent resident species some were present in high numbers (e.g., American Kestrel, Killdeer, and Loggerhead Shrike), while others were notably low (e.g., Rufous-sided Towhee).

Some noteworthy sightings deserve mention here. Certainly foremost among these was Tennessee's 9th Snowy Owl, which showed up in Stewart County in January and stayed into February, making nearly 100 observers momentarily ecstatic. Another rarity was an *Empidonax* flycatcher seen (and photographed) in Sumner County from early December into mid January; few winter sightings of species in this genus are reported in Tennessee. Also rarely seen in winter are Lesser Yellowlegs and Pectoral Sandpiper; yet one of each made an appearance in the region this season.

Christmas Bird Count (CBC) results are reported below where they shed

light on various species' winter status in the region. Most of the trends noted in the report for the previous winter (*Migrant* 57: 52-54, 1986) continue; happily, however, it can be noted that the Bewick's Wren had a good winter, being reported on 2 CBCs. Data from the Winter Roadside Raptor Survey are used below to clarify the status of a few species; a full report on these surveys will appear separately.

Thanks are due Ruth V. McMillan and Elizabeth C. O'Connor for the considerable work which they expended in analyzing the 1986 regional CBC data. The compiler is also grateful to John C. Robinson for review of a draft of this manuscript.

Loon — Cormorant: Common Loon: 31 Jan (12) WDR (MDH), only higher numbers were on Hickory-Priest CBC. Horned Grebe: 22 Dec (50) WDR (MDH), only higher numbers were also on Hickory-Priest CBC. Double-crested Cormorant: 27 Dec (1) Columbia CBC (Anne R. Lochridge); 8 Jan (3) DRU (JCR); 31 Jan (2) WDR (MDH); only reports.

Herons: Great Blue Heron: 16 Feb (156; also 130 recently maintained nests in rookery) DRU (JCR), max. Black-crowned Night-Heron: 3 Jan (42) Hickory-Priest CBC (NTOS), exceptionally high number probably due to warm winter; 11 Feb (168 old nests) island in Old Hickory Lake offshore from GSP (PBH, W. Christie, J. Strothers, B. Puckett), far more nests than were anticipated to occur at this site, based on number of birds seen in area previous summer. Green-backed Heron: no reports despite mild winter.

Waterfowl: Tundra Swan: 14 Dec-16 Feb (3) DRU (JCR), only report. Greater White-fronted Goose: 24 Dec (1) Pardue's Pond, Dickson Co. (MHI, ECC); 18 Feb (1) CCNWR (JCR); only reports. Canada Goose: 27-28 Jan (27,600) CCNWR (JCR), max; peak number possibly due to ice storm just prior to this survey. Blue-winged Teal: 1-5 Jan (1) CCNWR (JCR), only report (low for a mild winter). Northern Shoveler: all season (up to 15) CCNWR, including CBC (JCR); also seen on Columbia and Lebanon CBCs. Ring-necked Duck: 1-7 Feb (2170) CCNWR (JCR), max. Common Merganser: 21 Dec-1 Jan (3-4) CCNWR, including Cross Creeks CBC (JCR, *et al.*); 27 Dec (12) Lebanon CBC, WLC (*fide* RVM); 16 Feb (13) DRU (JCR), only reports.

Vulture — Osprey: Black Vulture: Dec-Jan (120 at roost) WLC (RVM, Melville R. McMillan); 10 Jan (202 at roost) MUC (ALP, Dianne Pressnell); largest roosts reported, although Highland Rim CBC also had high numbers, which may have been associated with roosts (*fide* F. Nicky Medley); MHC numbers on Winter Roadside Raptor Survey were also high (FLB, SHB); GSP numbers much lower than normal (J. Paul Crawford, Dot T. Crawford). Turkey Vulture: 1 Feb (200 at roost) near Burristown, Jackson Co. (Joseph W. Wahl), largest roost reported; no concentrations revealed by the CBCs. Bald Eagle: results of Midwinter Eagle Survey (Table 1) in region were encouraging; 16 Jan (1 imm shot and killed) western WYC (*fide* TWRA officers Bud Davis and Tim Aston); despite the modest reward now available for information leading to the arrest and conviction of eagle-shooters, most such persons act with impunity; perhaps a larger reward would change this circumstance? Osprey: noted on Lebanon and Pickett County CBCs, undoubtedly due to mildness of winter.

Accipiters: Sharp-shinned Hawk: maintained high numbers on the regional CBCs with 3.32 birds/100 party hrs. recorded, nearly identical to

the highest-ever figure (3.36 birds/100 party hrs.) reported the previous winter; 22 non-CBC reports also received. Cooper's Hawk: the total of 4.08 birds/100 party hrs. on the regional CBCs was the highest ever by a substantial margin, culminating several recent years of slow increase; 21 non-CBC reports submitted. Regional observers are urged to submit data about accipiters with greater completeness and regularity.

Hawk — Kestrel: Red-tailed Hawk: the 43.58 birds/100 party hrs. on regional CBCs was highest total ever, continuing the upward trend of this species in the region; dark phase birds were reported in greater numbers than is usual for a winter in the region: 15 Nov-20 Feb (1 ad) CCNWR (JCR), presumably the same individual which wintered at the same site on CCNWR the previous winter (see Fall 86 report and *Migrant* 57:56, 1986); 8 Dec (1 imm, carefully described) CCNWR (JCR); 25-26 Dec (1) MHC (FLB, SHB); 27 Dec (1) LWC (DJS); 31 Jan (1 ad) CCNWR (JCR), not the same bird as represented by the first record in this entry; 31 Jan (1 ad) RUC (TJW, Caryl J. Ploger). Rough-legged Hawk: 30 Nov, 26 Dec (1) MHC (FLB, SHB); 22 Dec (1) Smith County (RVM, Melissa A. Tucker); 27 Dec (2) Lebanon CBC (*fide* RVM); 2 Jan (1 dark phase) Land Between the Lakes, SWC (DWB); 16 Jan, 18 Feb (1) MUC (OBL, KGA); 30 Jan (2, including 1 dark phase) FCMR, MTC (JCR); an average or slightly below average year for the species (1 report with insufficient details came in from RUC). Golden Eagle: see Midwinter Eagle Survey (Table 1); 31 Jan (1) WMC (Edward L. Warr), only other report. Merlin: 3 Feb (1) Pelham, Grundy Co. (Robin A. Rudd); 20 Feb (1) WDR (James R. Peters); only reports of what were probably early migrants. American Kestrel: the 70.73 birds/100 party hrs. noted on the regional CBCs represented the highest total since 1968 and was considerably higher than the average for 1966-85 (44.40 birds/100 party hrs.).

Rail — Crane: Virginia Rail: all season (1 heard) MOP (WNJ), not reported from this site during the 2 preceding winters, though it was reported for 8 consecutive winters prior to that; 21 Dec (1 well seen) CCNWR CBC (JCR); only reports. Sora: all season (1-2) MOP (OBL), only report; same comment applies here as for preceding species at MOP. American Coot: although the 61.87 birds/100 party hrs. seen on the regional CBCs represented a slight increase over the totals for the previous 3 years, the species' numbers on regional CBCs remain far below those of the 1960's and 1970's. Sandhill Crane: 14 Dec (38) N WLC (Robert Abernathy), last fall migrants reported; 21 Feb (135) CFC (Grady L. York, Willa P. York, F. Nicky Medley), first spring migrants reported.

Shorebirds: Killdeer: the 108.40 birds/100 party hours on the regional CBCs represented the largest number since 1966 and was nearly double the average for 1966-85 (55.05 birds/100 party hrs.). LESSER YELLOWLEGS: 3 Jan (1) Percy Priest Lake on Hickory-Priest CBC (C. Gerald Drewry, Jr.), good documentation; 2nd NA winter record and first since 1923. Least Sandpiper: 21 Dec, 1 Jan (2) Cumberland City Steam Plant, SWC (JCR), only report; the 21 Dec sighting also reported on Cross Creeks CBC. PECTORAL SANDPIPER: 28 Jan (1) Barkley WMA, SWC (Lula C. Coffey, JCR), good documentation; mighty rare in the region in winter. Common Snipe: highest CBC numbers (33.61 birds/100 party hrs.) since 1968.

Gull — Owl: Bonaparte's Gull: 11 Dec (1) Laurel Hill Lake, LWC (DJS), first LWC record; none on the regional CBCs for the first time since 1968. **SNOWY OWL**: 5 Jan-6 Feb (1 imm) near Dover, SWC, from Dover bridge on

Rt. 79 to 3-4 km northwestward in Barkley WMA (JCR, CPN, m.ob.), excellent documentation; 9th state record and first since January 1961; details, including a full discussion of this bird's dietary habits, will be published.

Nighthawk — Nuthatch: Common Nighthawk: 9 Dec (1) Elliston Place, NASH (C. Kinian Cosner, Jr.), only report. **EMPIDONAX SP.**: 4 Dec-14 Jan (1, photos) Hendersonville, SUC (Richard Newton, MHI, ECC), excellent documentation; first NA (and state?) winter record of a member of this genus; the bird should have been netted or collected for specific identification, as winter empids in the eastern U.S. are nearly as likely to represent a western species as an eastern one. White-breasted Nuthatch: continues upward trend on CBCs, with this year's 34.35 birds/100 party hrs. being the highest ever by a slight margin. Red-breasted Nuthatch: reported on 4 of 10 regional CBCs in low numbers; few non-CBC reports; not a good winter for the species in the region.

Wrens: Bewick's Wren: more than the usual number of wintering birds reported from 1 site in RUC (RVM), 2 in WLC (*fide* RVM, Earline C. Berry), and 5 in MUC (ALP); mild weather was probably the cause for these birds' wintering. House Wren: reported from LWC (DJS), PUC (RWS), and SWC (DWB), as well as on the Columbia and Hickory-Priest CBCs; species continues to do well in all seasons in region. Winter Wren: reported in good numbers on the CBCs — 7.57 birds/100 party hours, highest since 1975. Sedge Wren: reported only on Columbia CBC. Marsh Wren: all season (1) MOP, including Columbia CBC (WNJ), only report.

Kinglet — Yellowthroat: Ruby-crowned Kinglet: lowest numbers on CBCs — 4.25 birds/100 party hrs. (previous ten-year average 12.85 birds/100 party hrs.) — since 1968; continues to trend downward as a wintering species. Blue-gray Gnatcatcher: 7 Feb (1) 5 km NW Loretto, LWC (Don K. Simbeck, Michael A. Beuerlein), few regional winter records. Eastern Bluebird: continued high numbers on the CBCs. Water Pipit: 25 Jan (200) Asbury Lane, RUC (TJW), max; probably concentrated due to ice storm at that time. Loggerhead Shrike: best year since 1972 on the CBCs (29.36 birds/100 party hrs., about double the total for each of the past three years); also higher on the Winter Roadside Raptor Surveys in region than in previous winter. Yellow-rumped Warbler: the 14.40 birds/100 party hrs. on CBCs represented the lowest total since 1973 and was well below the previous ten-year average (56.30 birds/100 party hrs.); several observers (JCR, DWB, and EJW) commented on the species' scarcity, which is hard to explain as a product of the warm weather the region experienced. Common Yellowthroat: none on CBCs; no reports despite the mild winter.

Towhee — Sparrow: Rufous-sided Towhee: lowest numbers in 20 years on CBCs. American Tree Sparrow: 21 Dec (5) Cross Creeks CBC (JCR *et al.*), only report. Chipping Sparrow: 27 Dec (1) Clarksville, MTC (Nita R. Heilman), only report. Vesper Sparrow: 6 Dec (6) CFC (MDH); 27 Dec (1) Buffalo River CBC, LWC (DJS, EDC); only reports. LE CONTE'S SPARROW: 8 Feb (1) CCNWR (JCR), only report. Lincoln's Sparrow: 27 Dec (1) Buffalo River CBC, LWC (DJS, EDC), only report. HARRIS' SPARROW: 24 Dec (1) near Brush Creek Recreation Area, Cheatham Co., on the apparently defunct Ashland City "CBC" (MHI, ECC), only report; first NA sighting since 1977.

Blackbirds: BREWER'S BLACKBIRD: all season (up to **157**) at least 10 locations in LWC (DJS *et al.*); 27 Dec (1) NASH CBC (PBH); 31 Jan (5) near

Little Cypress Creek 2 km N of Alabama line in WYC (DJS). Blackbird spp.: all season (roosts of 1 million and 0.5 million) Lawrenceburg and Loretto, LWC (DJS), largest local roosts reported in many years. Northern (Baltimore) Oriole: 20 Dec-26 Jan (1 ad male) Clarksville, MTC (Nancy R. Hughes, Earl Hughes, EJW), could not fly well 24 & 26 Jan, perhaps a consequence of ice storm.

Finches: Purple Finch: low to moderate numbers were reported by most observers: on CBCs this species was reported in lower numbers than all but 1 of last 10 years. House Finch: dropped slightly in numbers from previous winter on CBCs but still reported in very high numbers compared to any time prior to 1985. RED CROSSBILL: 1 Jan (2) FCMR, SWC (JCR), excellent details; only report. Pine Siskin: widespread but in low numbers in Dec; became more plentiful as winter progressed with the 120+ banded in MUC (Katherine A. Goodpasture, KGA) in Feb representing the highest population density in the region. American Goldfinch: at best an average year with some observers (Ann T. Tarbell, RWS) reporting it lower than that. Evening Grosbeak: like the siskin, widespread but in low numbers in Dec, becoming somewhat more plentiful thereafter.

Addenda: **LONG-EARED OWL**: mid-Feb 1981 and 29 Jan 1982 + (1, presumably same bird) Cheek Bend, MUC (Paul W. Parmalee *et al.*); see *Journal of Field Ornithology* 53(4): 418-420.

Corrigenda: *Migrant* 57: 55, 1986: in Table 5 change "Willamson" to "Williamson"; in Table 6 change "Red/shouldered" to "Red-shouldered" and add "12" at the end of the first line in footnote a.

Locations: CCNWR — Cross Creeks National Wildlife Refuge, Stewart Co.; CFC — Coffee Co.; DRU — Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co.; FCMR — Fort Campbell Military Reservation, Montgomery and Stewart Cos.; GSP — Gallatin Steam Plant, Sumner Co.; LWC — Lawrence Co.; MHC — Marshall Co.; MOP — Monsanto Ponds, Maury Co.; MTC — Montgomery Co.; MUC — Maury Co.; NA — Nashville Area (all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, Wilson Cos., and parts of Dickson and Trousdale Cos.); NASH — Nashville; PUC — Putnam County; RUC — Rutherford Co.; SUC — Sumner Co.; SWC — Stewart Co.; WDR — Woods Reservoir, Franklin Co.; WLC —Wilson Co.; WMC — Williamson Co.; WYC — Wayne Co.

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EASTERN RIDGE AND VALLEY REGION — The comments "boring" and "not particularly exciting" from local compilers aptly described this winter's bird watching. Rather mild temperatures prevailed throughout, except for a brief cold snap in late January and early February. Precipitation, also, was slightly above normal at most places. The only significant snowfall occurred on 22 January depositing 5 inches in Chattanooga for their heaviest snowfall since February 1979; but only 8 inches fell in the Tri-cities, in the northeast corner of the region. Because of the mild conditions, few of the desired northern invaders appeared. Winter finches were present in moderate numbers, but erratic distribution. The diversity of lingering species was certainly the highlight of the season, yet most observers don't get very excited about "summer birds in winter." In the long list of half-hardy and unexpected lingering species, Common Nighthawk is

the most remarkable. Also noteworthy are American Bittern, Forster's Tern, Indigo Bunting, Lincoln's Sparrow, and the large number of overwintering Sandhill Cranes. Waterfowl numbers provided by the Tennessee Wildlife Resources Agency were recorded on aerial surveys.

Loon — Heron: Red-throated Loon: 6-7 Dec (1) CHL (KHD, LHD *et al.*). Common Loon: 3 all winter on BOL (LHTOS); regular, max 21 Feb (22) CHL (CTOS). Pied-billed Grebe: very scarce all winter on BOL (LHTOS); 12 Dec (100) CHL (CTOS), max. Horned Grebe: 3, 12 Dec (8/6) BOL (LHTOS); regular, max 7 Dec (46) CHL (CTOS). Double-crested Cormorant: 10 Jan (5) CHL (JTP, CDB); 17 Jan (1) FLL (MLD, BF). American Bittern: bird mentioned last report at Lutrell, Union Co., in Nov stayed until at least 30 Dec (Dwayne Shoffner, *fide* JBO). Great Egret: 17 Jan (1) FLL (MLD, BF). Green-backed Heron: 20 Dec (1) KNX CBC (A. Boyd Sharp); 4 Jan (1) HRA (KHD, LHD); 20 Jan (1) CHA (JTP, CDB).

Waterfowl: Snow Goose: 7-14 Dec (1 blue) SAB (KHD, LHD); 4 Jan (1 blue) (KHD, LHD); 6, 17 Jan, 3 Feb (1/3/1 white) HRA (TWRA/RJH). Canada Goose: 31 Dec (716) UHR, 30 Jan (861) WBL (TWRA), max. Green-winged Teal: 4 Dec (12) LST (RLK); 15 Feb (300) HRA (KHD, LHD), max. American Black Duck: 31 Dec (344) UHR, 6 Jan (1473) CHL & HRA, 3 Feb (113) WBL (TWRA), max counts; none in JNC area all winter. Mallard: 12 Dec (994) UHR and (734) DOL, 30 Jan (4067) CHL & HRA, 3 Feb (513) WBL (TWRA), max counts. Northern Pintail: 3 Jan (125) HRA (DCC), max. Gadwall: 12 Dec (1213) CHL & HRA (TWRA), max. American Wigeon: 6 Jan (725) CHL & HRA (TWRA), max. Canvasback: 3 Jan (1) HRA (DCC); 17 Jan (4) CHL (RJH); 21 Feb (9) CHL (KHD, LHD). Redhead: 3 Dec (200) CHL (JSL, LHD), max; 22 Feb (2) BLC (JAK). Ring-necked Duck: 12 Dec (1026) CHL & HRA, (485) UHR, (350) DOL (TWRA), max. Greater Scaup: 21 Feb (450) CHL (KHD, LHD), (most there since 4 Mar 1974). Lesser Scaup: 3 Dec (250) CHL (LHD, JSL), max. Scaup sp.: 12 Dec (962) UHR (TWRA), max. Oldsquaw: 12-13 Dec (1) CHL (Albert M. Jenkins, Eugene M. Ryther *et al.*). Common Goldeneye: 9 Feb (261) CRL, (110) UHR (TWRA), max. Bufflehead: 30 Jan (40) WBL (TWRA), max. Hooded Merganser: 6 Dec (240) HRA (CTOS), max; 7 Dec (175) Kingston Steam Plant, Roane Co. (RC, CPN), unusually high number for area. Common Merganser: no reports. Red-breasted Merganser: 3, 7 Dec (14) CHL (CTOS). Ruddy Duck: 6 Dec (125) CHL (CTOS), max; 12 Dec (6) BOL (Sally Goodin, Glenn Swofford).

Vulture — Woodpecker: Black Vulture: 12, 24 Dec (12/15) SPW (GWM), uncommon in winter; numerous reports of 1-20 birds in JNC area, where uncommon any season (LHTOS). Osprey: 12 Dec (1) NRL (JCH); 19 Feb (1 found wounded) Bledsoe Co. (Mark Patterson, TWRA). Bald Eagle: 4 Jan (1 imm) Hamblen Co. (DJN); 9 Feb (2 ad, 2 imm) Boyds Creek, Sevier Co. (JCW, Keith Watson); see intro. Northern Harrier: 4 Dec (1) JNB (RLK), only JNC area report. Golden Eagle: 1, 3 Jan (1 ad) HRA (JTP, CDB *et al.*). Peregrine Falcon: 6 Dec (1 ad) CHA (KHD, LHD, JSL, J. N. Howard, Randall L. Doyle); 4 Jan (1 ad) HRA (KHD, LHD). American Coot: 12 Dec (1664) WBL & (405) UHR, 6 Jan (2269) CHL & (1117) Nickajack Lake, Marion Co. (TWRA), max counts. Sandhill Crane: present all winter on Hiwassee Island, Meigs Co., max on 1 Jan (104) HRA CBC (JCW, SLW *et al.*). Killdeer: 1 Feb (500) SAB (KHD, LHD), max. Spotted Sandpiper: 3 Jan (1) KPT CBC (Wynn Herbert *et al.*); 11 Jan (1) HRA (DCC). Least Sandpiper: 13 Dec (15) HRA (KHD, LHD). Dunlin: 6 Dec (40) DOL (JAK); 15 Dec (1) BOL (RLK); 20 Dec

(3) BLC (JAK); only 5 sightings all period at usual SAB wintering area, max 31 Dec (60) (KHD, LHD). Common Snipe: only one report in JNC area (RLK); only 3 reports of up to 17 birds at SAB — "the lowest number in memory" (KHD). American Woodcock: 20 Dec (2) Amnicola Marsh, HLC (KHD *et al.*); 12-25 Feb (1-2) SAB (KHD, LHD); 12 Feb (1) Austin Springs, WGC (RLK); 22 Feb (2) GNC (RN). Bonaparte's Gull: 20 Jan (1) BOL (RLK), only report there; 1 Feb (120) CHL (KHD, LHD), max. Ring-billed Gull: 19 Feb (700) Fort Loudoun Dam, Loudon Co. (RC), rather high number there. Herring Gull: none reported from BOL all period (LHTOS). Forster's Tern: 7 Dec (1) CHL (KHD, LHD, SLW, DCC, Jay W. Knott), third CHA area winter record. Common Barn-Owl: 25 Dec (1) LaFollette, CPC (GWM), only report. COMMON NIGHTHAWK: 20 Dec (1) CHA CBC (Paul C. Harris *et al.*), first winter record there. Red-headed Woodpecker: 6 wintered near NRL (JCH); 1 wintered at NOR (CPN); only reports.

Lark — Vireo: Horned Lark: 29 Jan (47) Tri-cities Airport, Sullivan Co. (RLK); 31 Jan (approx. 800) McDonald, GNC (JAK), very high number for region. Red-breasted Nuthatch: present in low numbers in KNX and JNC areas (*fide* CPN and RLK respectively); only 1 CHA area report on 20 Dec (3) (RJH). House Wren: 21 Jan (1) Conklin, WGC (RLK). Eastern Bluebird: present in good numbers; record high of 144 on KNX CBC (KTOS). American Robin: much more numerous than normal in KNX and JNC areas (KTOS, LHTOS). Gray Catbird: 20 Dec (1) CHA (Peter D. Robinson). Brown Thrasher: despite mild weather, only 1 report in JNC area (Catherine Bireley). Cedar Waxwing: erratic, numbers decreasing later in winter in JNC and KNX areas (LHTOS, KTOS); 25 Dec (approx. 500) CPC (GWM), max. Loggerhead Shrike: 1-3 in WGC (RLK); 1-4 in GNC (RN, DJN); 20 Dec (4) BLC (JAK). Solitary Vireo: 20 Dec (1) HLC (RJH), first local winter record; 3 Jan (2) KPT CBC (RLK).

Warbler — Grosbeak: Orange-crowned Warbler: 20 Jan — EOP (1 at feeder) KNX (Louise F. Fuller), same location as bird reported last winter. Pine Warbler: 1-3 regular at feeders in HLC (Janet Phillips, Robin A. Rudd). Palm Warbler: 13 Dec (6) Jefferson Co. (JAK). Common Yellowthroat: 21 Jan (1) LST (RLK). Indigo Bunting: 28 Feb (1 first year male) KNX (MLD), second Knox Co. winter record. Chipping Sparrow: 20 all period at Ocoee, Polk Co. (SLW, JCW); 27 Dec (3) NOR CBC (CPN); 26-28 Jan (2) GNC (DJN); 22 Feb (1) BLC (JAK). Vesper Sparrow: 31 Dec (5) SAB (JAK, KHD); 4 Jan (3) HRA (KHD, LHD); 23 Jan — 5 Feb (1-6) Roaring Fork, GNC (RN, W. Ruth Nevius *et al.*). Lincoln's Sparrow: 13 Jan (1) SPW (GWM), rare in region in winter. Rusty Blackbird: 21 Dec (30) SPW (GWM), only report. Purple Finch: present in moderate numbers in KNX area (*fide* CPN); rather scarce in CHA, GNC, JNC areas (*fide* KHD, JAR, GDE respectively). House Finch: continues to increase in abundance and distribution. Red Crossbill: 9 Feb (3) CHA (RJH). Pine Siskin: numerous reports of up to 300 birds in CHA area, up to 100 birds in KNX area, but only 15-30 birds in GNC and JNC areas (*fide* KHD, CPN, JAR, RLK respectively). Evening Grosbeak: numerous flocks of up to 40 birds in CHA area, several flocks of 30 or more from edge of Smokies but uncommon in KNX area, 8-22 Feb (8-12) GNC, none in JNC area (*fide* KHD, JBO, JAR, GDE respectively).

Locations: BLC — Blount Co.; BOL — Boone Lake, Sullivan & Washington Cos.; CHA — Chattanooga; CHL — Chickamauga Lake, Hamilton Co.; CPC — Campbell Co.; CRL — Cherokee Lake, Grainger, Hamblen, Haw-

kins & Jefferson Cos.; DOL — Douglas Lake, primarily Jefferson Co.; FLL — Fort Loudoun Lake, Blount, Knox & Loudon Cos.; GNC — Greene Co.; HLC — Hamilton Co.; HRA — Hiwassee River Area, primarily Meigs Co., but also Bradley, McMinn & Rhea Cos.; JNB — Jonesborough, Washington Co.; JNC — Johnson City; KNX — Knoxville; KPT — Kingsport; LST —Limestone, Washington Co.; NOR — Norris, Anderson Co.; NRL — Norris Lake, Union Co.; SAB — Savannah Bay, Hamilton Co.; SPW — Speedwell, Claiborne Co.; UHR — Upper Holston River, Hawkins Co.; WBL — Watts Bar Lake, Meigs, Rhea & Roane Cos.; WGC — Washington Co.

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EASTERN MOUNTAIN REGION — This was a dull, uninteresting and sometimes boring winter period compared to last year. Almost no waterfowl sightings, combined with fewer than normal unexpected observations, created a most unusual 3 months. Among the unusual sightings were Yellow-crowned Night-Herons and 2 reports of Northern Goshawks.

Rainfall totals for all 3 months were a little above average, seemingly ending a 2-year drought. A total of 8 inches of snow fell on 22-23 January at Elizabethton, for the heaviest snowfall of the period. Temperatures were mild during December and the first part of January. Cold, snowy weather prevailed from mid January through the end of the period.

Loon — Owl: Common Loon: 8 Feb (1) WTL (FJA), only report. YELLOW-CROWNED NIGHT-HERON: 20 Dec (2) ELI (RPL), first area winter record. Canada Goose: 5-25 present in ELI area through period (LHTOS). Wood Duck: 1-4 at ERW during Jan, Feb (GWS *et al.*). Amer. Black Duck: 5 Jan (2) WIL (RLK), no reports later in period. Gadwall: 20 Dec (1) Hunter Swamp, ELI (RPL, Sally Goodin, GWS); 16 Jan — 13 Feb (2-5) BRI (GDE *et al.*). Amer. Wigeon, Canvasback, Redhead, Lesser Scaup, Common Merganser, Red-breasted Merganser: no reports in ELI area, unusual. Greater Scaup: 17 Dec (2) WIL (RLK); 5-9 Jan (2) WIL (LHTOS). Hooded Merganser: 23 Dec (13) RIL (GDE, GWS); 27 Dec (1) SHL (RPL, GDE), only reports. Ruddy Duck: 6 Jan (4) WIL (RLK). Black Vulture: many more reports than normal in ELI area. NORTHERN GOSHAWK: 23 Dec (1) Roan Mountain village, Carter Co. (FJA); 27 Dec (1) SHL (RPL, GDE). Sharp-shinned Hawk: 8 reports in ELI area, average. Cooper's Hawk: 6 reports in ELI area, average. Red-shouldered Hawk: 20 Dec (1) ELI (GDE, HLF). American Woodcock: 20 Dec (1) WTR (FJA, CS). Ring-billed Gull: 27 Dec (59) SHL (RPL, GDE); no other gull reports. Great Horned Owl: 3-6 regular near SHL (*fide* RPL); 27 Dec (18) BRI CBC (RPL). Barred Owl: 20 Dec (1) WIL (FJA, CS).

Woodpecker — Grosbeak: Red-headed Woodpecker: 20 Dec (2) ELI (FJA, CS), only report. Common Raven: normal number of reports from high elevation areas (*fide* GDE). Red-breasted Nuthatch: normal number of reports from high elevation areas (*fide* GDE). Carolina Wren: above normal numbers in ELI area (*fide* GDE). Eastern Bluebird: above normal numbers in ELI area (*fide* GDE). Hermit Thrush: 20 Dec (2) ELI (LHTOS), then no reports until after snowfall on 22-23 Jan, when became numerous in ELI area (*fide* GDE). American Robin: unusually abundant throughout period in ELI area (*fide* GDE). Brown Thrasher: 20 Dec — end of period (1-2) ELI area (LHTOS). Cedar Waxwing: abundant throughout period in ELI area (LHTOS). Loggerhead Shrike: 27 Dec (1) SHL (RPL, GDE), only report. Yellow-rumped Warbler: abundant throughout period in ELI area (*fide*

GDE). Chipping Sparrow: 14 Dec (12) ELI (FJA, Gary O. Wallace), last report. Fox Sparrow: 20 Dec — end of period, above average numbers in ELI area (LHTOS). Purple Finch: 6 Dec (200+) SHL (RPL); 2-4 at feeders in ELI area, lower numbers than in past (*fide* GDE). House Finch: becoming a nuisance at feeders in ELI area (*fide* GDE). Red Crossbill: 20 Dec (8) WTL (FJA, CS); 5 Jan (2), 6 Jan (8) WTL (RLK); 7 Feb (4) WTL (FJA). Pine Siskin: 1-20 Dec (5-12) ELI (HLF); 23 Jan (175+) ELI (HLF); 7-28 Feb (12-18) ERW (GWS *et al.*). Evening Grosbeak: 13-20 Dec (2-7) ELI (GDE *et al.*); 27 Jan — end of period). (35-50 daily at feeder) Hampton, Carter Co. (*fide* GDE); only reports.

Locations: BRI — Bristol, Sullivan Co.; ELI — Elizabethton, Carter Co.; ERW — Erwin, Unicoi Co.; SHL — South Holston Lake area, Sullivan Co.; WTL — Watauga Lake area, Carter/Johnson Cos.; WIL — Wilbur Lake, Carter Co.

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OBSERVERS

FJA — Fred J. Alsop, III
KGA—Kenneth G. Anderson
DPB—Diane P. Bean
FLB—Frank L. Bills
CDB—C. Del Blum
DWB—Donald W. Blunk
GBB—Gil B. Beaver
SHB—Sharon Bostick
CHB—Carolyn H. Bullock
DCC—David C. Chaffin
RC—Richard Clark
BBC—Ben B. Coffey, Jr.
LCC—Lula C. Coffey
ECC—E. Camille Crenshaw
EDC—Edward D. Crouch, Jr.
DAD—Dollyann Daily
MLD—Marcia L. Davis
KHD—Kenneth H. Dubke
LHD—Lillian H. Dubke
GDE—Glen D. Eller
HLF—Harry L. Farthing
BF—Barbara Finney
PBH—Paul B. Hamel
RJH—R. John Henderson
MDH—Marguerite D. Hernandez
AHH—Annie H. Heilman
NRH—Nita R. Heilman
JCH—Joseph C. Howell
MHI—Maxey H. Irwin
WNJ—William N. Jernigan
RLK—Richard L. Knight
JAK—Jon A. Koella
RPL—Richard P. Lewis
OBL—O. Bedford Lochridge
JLS—Jonnie Sue Lyons
GWM—George W. McKinney
RVM—Ruth V. McMillan
RN—Richard Nevius
CPN—Charles P. Nicholson
DJN—Daniel J. Nieves
JBO—J. B. Owen
JTP—Johnny T. Parks
CJP—C. J. Ploger
ACP—Audrey C. Perry
ALP—Allen Pressnell
JCR—John C. Robinson
DJS—Damien J. Simbeck
RWS—Richard W. Simmers, Jr.
CS—Cathi Sullins
GWS—Glenn W. Swafford
MGW—Martha G. Waldron
EJW—Ellen J. Walker
JCW—J. Craig Watson
SLW—Susan L. Watson
JRW—Jeff R. Wilson
TJW—Terry J. Witt
CTOS—Chattanooga Chapter, TOS
KTOS — Knoxville Chapter, TOS
LHTOS—Lee R. Herndon Chapter, TOS
NTOS — Nashville Chapter, TOS
TWRA — Tennessee Wildlife Res. Agency

BOOK REVIEW

THE MIGRATION OF HAWKS By Donald S. Heintzelman. 1986. Indiana University Press, Bloomington/Indianapolis. 369 pp., 17 figures, 5 maps. This book is essentially a revision of Heintzelman's 1975 work *Autumn Hawk Flights: The Migrations in Eastern North America,* expanded to include the spring migration and all of North and Central America. It also borrows heavily from Heintzelman's 1979 *Guide to Hawk Watching in North America.* The book begins with a long introductory chapter describing hawk watching techniques and several aspects of hawk migration, including chronology, speed, and distance. This is followed by the longest section of the book, entitled "The hawk lookouts," a state-by-state, locality-by-locality description of hawk (and vulture) migration. The next sections, "Hawk migrations and weather conditions" and "Migration routes, geography and hawk counts," attempt to synthesize current knowledge of hawk migration. The concluding bibliography lists 62 pages of references through 1984, with at least one 1985 citation.

Heintzelman's knowledge of his subject is great, his coverage detailed, and his survey of the literature exhaustive. In this review, I concentrate on the treatment of Tennessee, for which he rightly notes "more is known about hawk migrations in this state than elsewhere in the Southern Appalachian states" (p. 152). The bibliography includes numerous citations to *The Migrant*, but none more recent than 1982. Frankly, I, a casual hawk-watcher, was disappointed. In the section on hawk lookouts, he lists 52 Tennessee sites. Here, and in listings for other states, he often fails to distinguish between sites regularly visited by hawk-watchers, and those from which casual observations have been published in *American Birds* or other journals or newsletters. Some of the sites are the same area listed more than once (e.g. Chilhowee Mountain/Foothills Parkway), or are close enough together to be lumped (e.g. Hump Mountain, Jane Bald, Roan Mountain; Sunset Rock [Bon Air], Sparta). Part of the blame for this rests with the various observers and compilers for inconsistent use of place names. At least one productive, easily accessible Tennessee site, the Thorn Hill lookout on Clinch Mountain, is omitted, despite the fact that counts taken there have been published for several consecutive years. For many locations, Heintzelman gives a rate of hawk migration in hawks per day or hawks per hour, without indicating whether the counts were made in one day at the peak of the hawk flight, or over many days throughout the migration season. I doubt that hawkwatching in Memphis (with a rate of 61.5 hawks/day) is as productive as at Meadow Creek Fire Tower in the mountains of Cocke County (62.5/day, p. 156). Heintzelman mentions the 1980 article by Morris Williams (*Migrant* 51:26), but omits David Evan's important article (*Migrant* 54:17, 1983) on Tennessee recoveries of migrant hawks banded in Minnesota.

In the chapter on hawk migration routes and geography, Heintzelman evaluates "the many locations and hawk migration flight-lines where concentrations of these birds occur under favorable local weather conditions" (p. 265). He correctly cautions that the observed migration from these points may be part of a larger broad-front migration. For different geographic areas (e.g. Appalachian Mountains, Great Lakes), he briefly discusses the rate of hawk migration at regularly covered lookouts. Rogersville-Kyles Ford Fire Tower and Signal Point are the only Tennessee sites mentioned.

There is no mention in this chapter of the migration past Mendota Fire Tower in Virginia. The discussion of the various ridge systems and mountain ranges on which the various lookouts are located is inadequate. Maps showing major lookouts and topographic features would greatly improve this section. Where, for example, do Broad-winged Hawks go when they reach the southern end of the heavily-studied Kittatiny Ridge/Hawk Mountain system in Pennsylvania? On a scale closer to home, what happens to the large Broadwing flights reported from the Mendota, Kyles Ford, and Thorn Hill lookouts on Clinch Mountain when the birds reach the southern end of the ridge? Do they turn west to the eastern edge of the Cumberland Plateau, continue southwest over other lower ridges in the Ridge and Valley region, or turn south to Chilhowee Mountain and the western edge of the Blue Ridge? Perhaps, despite the thousands of man-hours of counting migrating hawks and limited use of radar in hawk migration studies, the data required to answer these questions are still not available.

The book is relatively free of typographical errors, although Greeneville, Tennessee is misspelled on page 153. In a few cases, closer editing would have helped. The statement describing a flightline "on a bearing that never varies more than 232±4 degrees" (p. 115) is especially irksome. Such variation suggests Brownian motion more than a flightline!

Despite these shortcomings, I recommend this book to serious hawk watchers. I know of no other single work that presents such an extensive review of hawk migration literature. The statements by Heintzelman on the problems of hawks seen vs. hawks actually passing over an area, and on the problems in using hawk count information to analyze population trends should be studied by those engaged in long-term hawk watches. The shortcomings in Heintzelman's analysis should point out research opportunities. I am hesitant in recommending this book to those with a casual interest in hawkwatching, particularly at a list price of $35 for a book with no photographs and few other illustrations. — CHARLES P. NICHOLSON

PREPARATION OF COPY FOR PUBLICATION

The purpose of THE MIGRANT is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders. Articles for publication originate almost exclusively from T.O.S. members.

Contributors should prepare manuscripts and submit them in a form acceptable to the printer, after editorial approval. Both articles and short notes are solicited but their format should be somewhat different.

Some suggestions to authors for the preparation of papers for publication are given herewith.

MATERIAL: The subject matter should relate to some phase of Tennessee Ornithology. It should be original, factual, concise, scientifically accurate, and not submitted for publication elsewhere.

TITLE: The title should be concise, specific, and descriptive.

STYLE: Recent issues of THE MIGRANT should be used as a guide in the preparation of manuscripts. Where more detail is needed reference should be made to the *Style Manual for Biological Journals* available from the American Institute of Biological Sciences, 1401 Wilson Boulevard, Arlington, Virginia 22209.

COPY: Manuscripts should be typed double spaced on 8½ x 11″ paper with adequate margins, for editorial notations, and should contain only entries intended for setting in type, except the serial page number. Tabular data should be entered on separate sheets with appropriate title and column headings. Photographs intended for reproduction should be sharp with good contrast on glossy white paper in black and white (not in color). Instructions to the editors should be given on a separate sheet. Weights and measurements should be in metric units. Dating should be in "continental" form (e.g., 7 March 1981).

NOMENCLATURE: Common names should be capitalized followed by binomial scientific names in italics only after the first occurrence in the text for both regular articles and ROUND TABLE NOTES, and should conform to the A.O.U. Check-list 5th edition, 1957 and its Thirty-second Supplement. Trinomial should be used only after the specimen has been measured or compared with typical specimens.

BIBLIOGRAPHY: When there are more than five references in an article, they should be placed at the end of the article, otherwise they should be appropriately included in the text.

SUMMARY: Articles of five or more pages in length should be summarized briefly, drawing attention to the main conclusions resulting from the work performed.

IDENTIFICATION: Rare or unusual species identification to be acceptable must be accompanied by verifying evidence. This should include: date, time, light and weather conditions, exact location, habitat, optical equipment, distance, behavior of bird, comparison with other similar species, characteristic markings, experience of observer, other observers verifying observation and reference works consulted.

REPRINTS: Reprints are available on request. Reprint requests should accompany article at the time of submission. Billing to authors will be through the state T.O.S. Treasurer.

Books for review and articles for publication should be submitted to the editor. Seasonal reports and items should be forwarded to the appropriate departmental editor whose name and address will be found on the inside front cover.

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DOCUMENTATION AND SUBMISSION OF BIRD RECORDS IN TENNESSEE

STEPHEN J. STEDMAN AND JOHN C. ROBINSON

The job of recording and submitting bird sightings for publication has fallen on many generations of TOS members. During the past 70 years fieldworkers in the state have evolved increasingly sophisticated methods of fulfilling this basic responsibility of membership in our organization. One important cause of this evolving sophistication was the establishment of *"The Season"* report in this journal, from a germinal report about Memphis begun by Ben B. Coffey, Jr. (1931) to the reports from various cities organized by James T. Tanner (1950) to the version we now use (Smith 1968). In part, *"The Season"* became necessary because of the large number of bird records which needed to be published but for which there was not enough space using the traditional *"Round Table Note"* method of documenting sightings. Through the years compilers and editors have sought ever more reliable means of verifying the records submitted to them for inclusion in this report. Their search has led to the promulgation of many "rules" about how to document and submit bird records, with each new set of rules being slightly more exhaustive and comprehensive than those which preceded it.

The need for ever more sophisticated documentation guidelines is self-evident to those who do their birding with any degree of seriousness whatsoever. Birding has rapidly evolved into a hobby which interfaces with science, economics, politics, and sociology in countless ways. Consequently, the demands placed on the members of the birding community to document their findings have also increased. This is especially true where sightings of very rare and/or endangered species are involved. The way that we treat our records of these birds may well determine their fate in the next decade and into the next century, for it is only from a carefully documented history of sightings that the decline of a species can be established, that management plans for its future can be made, that the dollars needed to fund those plans can be legislated, and that the implementation of those plans can occur. Without solid data on which to base decisions, the fate of many bird species in our state might well be a more gloomy one than it already is. Whether a gloomy fate awaits species such as Bewick's Wren *(Thryomanes bewickii)* and Red-cockaded Woodpecker *(Picoides borealis)* remains unclear.

What is clear is that TOS members can materially affect the future of many species of birds in the state by the way that they handle their records. The following discussion of record-keeping offers one means by which we can collectively contribute to maintaining healthy populations of all Tennessee bird species.

MAINTENANCE OF PERSONAL RECORDS

The importance of maintaining an orderly system of personal observations cannot be overly stressed. While it is imperative that each ornithologist adopt a record-keeping system which meets his own needs, it must be realized that the data within such a system will meet scientific standards only if, at a minimum, the following five essential items of information are readily accessible:

1. Species of bird observed.
2. Number of individuals observed.
3. Location of observation (including state, county, and name of specific locality where observation was made).
4. Date(s) of observation.
5. Name(s) of observer(s).

The use of a small notebook in which daily observations and other notations are recorded adequately maintains a permanent record of the 5 items listed above; moreover, there is sufficient space in such a notebook to record detailed descriptions of selected sightings. However, since most compilers of bird records prefer to receive records in American Ornithologists' Union (A.O.U.) Check-List (1983 and subsequent supplements) order, this system becomes impractical to use when many observations are made each season.

An alternative method of record-keeping is to record the number of each species seen on a field check-list card and file these check-lists by date. While it is often wise to save these check-lists for future reference, this system also becomes cumbersome to use when it serves as the sole means of record-keeping for an active ornithologist.

Probably the best method of maintaining one's records involves the use of a notebook in which all notable observations for a given species are recorded on one page. Each page is then filed by species in proper A.O.U. Check-list order. The necessary information for each sighting can be listed on the appropriate page under the following basic column headings: "date," "number observed," "location," and "special remarks" (Figure 1). Details on observers, time of observation, plumage or age of the bird, etc., can be entered under "special remarks." The advantages of this record-keeping system are obvious:

1. Species are already listed in A.O.U. Check-list order, making it easier for the observer to prepare his seasonal report of observations.
2. There is space to record each of the five essential items of information identified above for each sighting.
3. At a glance, an observer can review all of the notable sightings he has made for each species throughout the year.

SPECIES: Bald Eagle (Haliaeetus leucocephalus) 1986

Date	Number	Location		Special Remarks
		State	County	
1-11	2	Tennessee	Henry	Big Sandy Unit, Tenn. NWR; 2 imm.
1-14	13	Tennessee	Lake	Reelfoot NWR, 11 adults, 2 imm.
1-18	2	Tennessee	Stewart	Cross Creeks NWR; 2 adults
2-4	3	Illinois	Williamson	Crab Orchard Lake; 3 adults
3-23	5	Tennessee	Humphreys	Duck River Unit, Tenn. NWR; 5 imm.
3-31	5	Tennessee	Stewart	2 adults w/ 3 young at nest next to CCNWR

Figure 1. Sample species record sheet for use in personal record-keeping system (part of a page only shown).

Under this system, one notebook is kept for each calendar year. This system, which has been described only in its most basic sense, can be modified any number of ways; however, space precludes additional elaboration here. Anyone interested in receiving more detailed information on this record-keeping system should contact the junior author at the address listed at the end of this article or refer to Remsen (1977) or Herman (1980).

In addition to maintaining an orderly system of bird records, the serious observer should also consider carrying a field notebook into the field at all times. Such a notebook is often 5½" x 8½", with heavy bond lined paper; the use of a permanent ink pen is recommended. Although anything can be entered into a field notebook, it is ideal for taking notes on, or illustrating, a rare species which is encountered in the field. The proper maintenance of a field notebook is invaluable when a feature article or Round Table Note is being prepared for publication and an observer needs to recall data about an observation several weeks or months after the bird was seen.

DOCUMENTING RARE OR UNUSUAL BIRDS

Taking notes in the field of a rare or unusual bird is the first step in the process of documentation. In order to perpetuate a sight record properly, however, these field notes must be used to prepare a formal report of the sighting. In Tennessee, the TOS Certification Committee provides a Rare Bird Reporting Form (also known as a documentation form) on which a formal report of a rare sighting can be recorded. Because the status, distribution, and abundance of bird species are constantly changing, the information provided on the Rare Bird Reporting Form will enable future ornithologists to accurately trace changes in population numbers, distribution, and habitat association of rare or unusual bird species. Lists of species which require documentation are provided hereinafter. It is important to realize that there can never be too many documentation forms submitted for a rare bird sighting. For this reason, even if you were not the one to discover

the bird, you should nonetheless properly document it. On some occasions, rare bird sightings go completely undocumented because everyone thinks the other birders will document them!

The Documentation Form

Documentation data about a sighting should be typed or neatly printed in black ink on the Rare Bird Reporting Form (available on request from regional compilers for *The Migrant*) or on 8½" x 11" white paper using the format described below. The original should be submitted to the appropriate regional compiler and a copy should be retained for your files. The following list, which was developed from standards identified by Robinson (1985), describes the information that should appear on a properly prepared Rare Bird Reporting Form (Figure 2):

Species: give the common name of the species identified (seen or heard).

Date(s): give the day(s), month, and year in which the bird was observed.

Number: give the number of individuals seen or heard.

Age: when known, state the age of the bird. For most species, "immature" or "adult" will suffice; however, for gulls in typical plumage, "first-winter" or "second-summer," etc., may be an appropriate description. Oftentimes, the age cannot be safely determined. Indicate this by writing in "unknown."

Sex: when known, indicate the sex of the bird. If this cannot be safely determined, as is the case with loons and grebes, for instance, write in "unknown."

Exact location: describe the location as accurately as possible, using site names, (e.g., Radnor Lake) and the distance and direction to the location of the nearest town. The county and state should *always* be included in case the form is reviewed by ornithologists in other states. It is always desirable to state the precise location, such as "Pool 4, Cross Creeks National Wildlife Refuge," so that another observer may return to the location at a later date.

Habitat: describe, to the best of your ability, the habitat in which the bird was found. It may be necessary to consult a botanical guide to expand upon the notes which were taken in the field. In the absence of any technical assessment of the habitat, such general descriptions as upland or lowland forest, pasture, old field, brushland, lake, slough, marsh, swamp, etc., are adequate.

Time of sighting: give the time of day, in hours and minutes, when observations began and ended, being sure to indicate when times are approximate. Because the bird may be hidden from view for a portion of the observation period, the length of time it was actually observed should also be indicated. When the bird was seen at different times on various dates and there is not enough space to indicate this, footnote this information on the reverse side of the documentation form.

Distance to bird: state the distance from you to the bird, giving minimum and maximum distances when appropriate.

Figure 2 (facing page). Sample of a properly completed documentation form.

Tennessee Ornithological Society Certification Committee
Rare Bird Reporting Form

Black-necked Stilt

Species: (Himantopus mexicanus) Date(s) of sighting: 2 Nov. - 4 Nov. 1985

Number: 1 Age: Unknown Sex: Unknown

Exact Location (include county and nearest city):
Cumberland City Steam Plant, 1.5 miles west of Cumberland City, Stewart County, Tennessee

Habitat in which bird occurred:
Ash ponds with emergent vegetation (primarily cattail) at a steam plant.

Time of Sighting: 11:28 AM to 12:03 PM (2 Nov.) Length of time observed: 35 minutes

Distance to bird (include maximum and minimum distances):
40 to 70 yards

Viewing Conditions: Overcast, with no sun glare; otherwise excellent conditions

Optical Equipment: Bushnell 7x35 binoculars and Bushnell Spacemaster II scope with 20x lens

OBSERVERS: Your name: John C. Robinson
Others with you: None
Others before or after you: Stephen J. Stedman and Donald Blunk on 4 November

DESCRIPTION (details on size, shape, plumage, color pattern, coloration of soft parts, diagnostic features, etc.):
Bill was long, straight, thin, black and pointed. Legs were extremely long and pinkish. Forehead area immediately above culmen was white; also a small white eyestripe was above the eye. Underparts and tail were white. In flight, a white triangle extended up the back to a single point as in dowitchers (legs dangled behind in flight). The rest of the plumage was black: head (down to cheek area, which was white), wings and nape of neck. Front of neck and breast were white. The upper back was brownish-black suggesting a female or immature. The bird literally "towered" over the Lesser Yellowlegs (Tringa flavipes) it was feeding with.

Species: Black-necked Stilt

Behavior observed: The bird fed in an aimless manner; walking and sometimes running in a jerky, random fashion, stabbing or pecking at any food it encountered.

Vocalizations (song/call notes):
In flight, emitted a series of "peep" or "keek" notes.

How did you separate this species from similar species?
American Avocet (Recurvirostra americana) lacks black and white head pattern and reddish legs; this species also has an obviously recurved bill. Otherwise, no other North American species resembles this startlingly-plumaged bird.

What references were consulted? How did they affect the preceding description of the bird?
National Geographic Society's Birds of North America supported this identification.

Previous experience with this and similar species?
I have seen the species on several occasions in Texas (22 birds).

Of what significance is this record in county/area/region/state?
This represents only the second state record outside of the Memphis area; also temporally unusual.

Were sketches, photographs, recordings made? No . If so, are they attached? ? When were field notes made? Immediately

John C Robinson
(Signature of Form Preparer)

2 November 1985
(Date Form Prepared)

Your address:
P.O. Box 215
Dover, Tennessee 37058

Telephone:
615-232-7442 (home)
615-232-7477 (work)

Viewing conditions: describe the position of the sun in relation to the bird and yourself, and give a brief overview of the weather (was it raining or drizzling; clear, overcast, or foggy; windy or calm?).

Optical equipment: describe any optical equipment you used to observe the bird by indicating the type of instrument and its magnifying power.

Observer(s): neatly print or type your name on the first line. If other observers accompanied you, list their names on the next line: and if you know of other observers who saw the bird before or after you, list their names on the third line.

Description: this is by far the most important part of the documentation and should ideally be written *before* consulting a field guide. The objective is not to describe how the bird looks in the field guide or how it should look in the field, but to describe what was actually seen in the field, even if this means that certain field marks noted in some of the field guides have to be omitted because they were not observed when the bird was seen. The task of describing a bird without consulting a field guide can be greatly simplified by becoming familiar with the various anatomical structures (crown, flanks, eyestripe, upper tail coverts, primary feathers, etc.) which are usually illustrated in the introductory sections of most field guides. Once learned, the different parts of the wing, for example, can be examined for details which may provide the only evidence which can be used to separate various species of shorebirds and gulls.

Do not give the size of the bird in inches or centimeters unless you actually held it in your hand and measured it. Rather, describe the size in terms of its relative appearance with nearby species or your own experience of observing similarly sized birds at an equal distance. The shape of the bird can best be described by a hand-drawn illustration or by comparing it with a closely related species (e.g., when describing a Ross' Goose (*Chen rossii*), it can be stated that the bird is similar in appearance to a Snow Goose (*C. caerulescens*) with certain notable exceptions such as a smaller-sized body, shorter neck, stubbier bill, etc.). Shape can also be expressed by describing the silhouette of the bird: falcons have long, narrow tails and crooked or "swept-back" wings; *Accipiters* have long, narrow tails and rounded wings; and *Buteos* have fanned tails and rounded wings.

Describe the color patterns of the bird's plumage and soft body parts, including the beak, feet, legs, and, if present, bare areas around the eye and forehead. If these field marks allow you to determine the age/sex (see Age and Sex above) or plumage (i.e., winter versus summer plumage) of the bird, make a statement to this effect. Keep in mind that the way colors contrast is just as important as the colors themselves. For example, a small plover described as having white undersides, one black neck band and a gray back could be either a Piping Plover (*Charadrius melodus*) or Semipalmated Plover (*C. semipalmatus*). If the bird is a Piping Plover, it might be described instead as having a light gray back which contrasted only slightly with the whitish breast, belly, and flanks.

In general, the size, shape, and/or color pattern should be given for all of the various anatomical structures of the bird. Although often ignored, the size, shape, and color of the beak and the tail are many times crucial to the identification of a species. Structures or plumage features which are

"obvious," "distinctive," or "conspicuous" to you will not be obvious, distinctive, or conspicuous to future ornithologists if you do not describe them in terms of size, shape, and color. Use quotation marks ("...") to indicate when you are quoting directly from your field notes.

Behavior: describe the bird's behavior as accurately as possible. Was it involved in courtship activities? If it was feeding, was it feeding actively like a phalarope or sluggishly like a plover? If it was walking, did it stop and start like a plover or did it bob up and down like a Spotted Sandpiper (*Actitis macularia*)? Did it isolate itself from other birds; was it agressive towards other birds; was it tame and allow close approach by birders?

Vocalizations: describe the bird's voice if it was heard. If the voice was not heard, be sure to indicate that fact.

Similar species: in this section, list all species or species groups which you feel could possibly be mistaken for the documented species. For each species listed, state why you feel this was not the species observed; all arguments used to substantiate this should be based only on what you observed in the field. In those rare instances where the species actually observed is not similar in appearance to any other North American bird species (e.g., Black Skimmer (*Rhynchops niger*)), be sure to state this is the reason why no species are listed in this section.

References consulted: list the titles of the books or the names of the persons with whom you consulted after finding the bird. Either collectively or for each reference, state how the information thus obtained influenced the written description. Ideally, as stated before, the bulk of the documentation should be written prior to consulting a field guide. There will be times, however, when the bird remains in sight long enough for comparison to be made between it and a picture in a field guide. In all instances, one should indicate which notes were made as a result of consulting with a field guide or with another person.

Previous experience: briefly summarize your experience with the documented species and all species listed in the Similar Species section. For most birds, this can be done by simply stating approximately how many individuals of a particular species you have seen: "I have seen hundreds of Sandhill Cranes (*Grus canadensis*)" or "I have seen 4 Groove-billed Anis (*Crotophaga sulcirostris*)." For those species the plumages of which change notably with the age of the bird, it is desirable to be more specific: "I have seen 4 adult Great Black-backed Gulls (*Larus marinus*) and 2 second-winter Great Black-backed Gulls." Be sure to indicate which species you have never previously seen, even if it is the species being documented.

Significance of record: to the best of your knowledge, state the significance of the sighting. Significance may be indicated by the number of times the bird has previously been observed in a paricular county or area of the state, by the time of year (e.g., a Mississippi Kite (*Ictinia mississippiensis*) in March would be significant even in Lake County), or by the number of individuals constituting the sighting (e.g., 450 Horned Grebes (*Podiceps auritus*) at Paris Landing State Park).

Sketches, photographs, or recordings: indicate whether any sketches, photographs, or sound recordings of the bird were made and, if so, indicate if they have been attached to the documentation upon submission.

Elapsed time before documentation: indicate how much time elapsed after you found the bird before you completed your field notes of the observation. Similarly, indicate how much time elapsed before the actual documentation form was completed.

Address: give the address and the phone numbers where you can be reached.

The completed form should be mailed along with your seasonal field records to the appropriate regional compiler for *The Migrant.*

ROUND TABLE NOTES

In addition to properly documenting the occurrence of species in the "Very Rare" category identified below, observers are also encouraged to prepare a Round Table Note for each sighting of a very rare species for publication in *The Migrant.* Used in this sense, a Round Table Note not only serves to report the species more fully, but it results in providing details on the circumstances (habitat, method of identification, etc.) surrounding the sighting to other ornithologists, many of whom will never have the opportunity to see your documentation form.

Observers should consult any recent issue of *The Migrant* for information about the manuscript, style, and documentation requirements of this journal. Once a documentation form has been completed for a rare sighting, it is relatively easy to compose a Round Table Note from the information contained in the documentation. Moreover, regional compilers or the current editor of *The Migrant* can provide information on previous occurrences of the species. Completed manuscripts should be submitted to the current editor of *The Migrant.*

LIST OF HARD-TO-IDENTIFY SPECIES

Because some species are hard to identify, bird records of them require (even from veteran observers) a **brief** mention of the salient field marks which led to their identification. A list of such hard-to-identify species follows (common names of all species listed hereinafter follow the 6th edition of the A.O.U. Check-List (1983) and later supplements):

Snowy Egret
Yellow-crowned Night-Heron (immature)
Greater Scaup
Common Merganser
Golden Eagle
Merlin
Peregrine Falcon
Western Sandpiper
Baird's Sandpiper
Short-billed Dowitcher
Long-billed Dowitcher
Common Tern
Yellow-bellied Flycatcher
Alder Flycatcher
Bewick's Wren
Connecticut Warbler
Mourning Warbler
Brewer's Blackbird

RARE AND VERY RARE SPECIES (REQUIRING DOCUMENTATION)

All rare species should be submitted with documentation included. The list of such species in Tennessee is very long, so observers need to become familiar with what is and what is not rare in the state (and in particular regions of the state). As an aid to field workers, a list of species which require

documentation on green "Unusual Sighting" cards, available from the Tennessee Wildlife Resources Agency (TWRA), and a list of species requiring documentation on the Rare Bird Reporting Form are offered below. Currently request green cards from Mr. Robert M. Hatcher, Coordinator, Nongame and Endangered Species, TWRA, Ellington Agricultural Center, P.O. Box 40747, Nashville, TN 37204. Observers should note that common species observed on unusual dates or at unusual locations should also be documented on a green card. Any species for which no previous record exists for the state should be properly documented on a Rare Bird Reporting Form. In the following lists, Western Coastal Plain region is abbreviated as WCPR, and Eastern Mountain Region is abbreviated as EMR.

Green Card Species

American White Pelican
Anhinga (in WCPR)
White Ibis
Tundra Swan
Mute Swan
Brant
Oldsquaw
Surf Scoter
White-winged Scoter
Mississippi Kite
(except along Miss. R.)
Purple Gallinule
Common Moorhen
Piping Plover
Black-necked Stilt
(Shelby Co. only)
American Avocet
Willet
Upland Sandpiper
Ruddy Turnstone
Red Knot
Laughing Gull
Franklin's Gull
Least Tern (except in WCPR)
Common Barn-Owl
Long-eared Owl
Short-eared Owl
Northern Saw-whet Owl
Red-cockaded Woodpecker
Fish Crow (except along
Miss. R.)
Common Raven (except in EMR)
Black-capped Chickadee (except
in Great Smoky Mtns. Nat. Park)
Le Conte's Sparrow
Snow Bunting
Western Meadowlark (in WCPR)
Red Crossbill (except in EMR)

Rare Bird Reporting Form Species

Red-throated Loon
Red-necked Grebe
Eared Grebe
Western/Clark's Grebe
Band-rumped Storm-Petrel
Brown Pelican
Anhinga (except WCPR)
Tricolored Heron
Glossy Ibis
White-faced Ibis
Roseate Spoonbill
Wood Stork
Fulvous Whistling-Duck
Black-bellied Whistling-Duck
Ross' Goose
Barnacle Goose
Long-tailed Jaeger
Common Black-headed Gull
Iceland Gull
Glaucous Gull
Great Black-backed Gull
Black-legged Kittiwake
Sooty Tern
Black Skimmer
Band-tailed Pigeon
Common Ground-Dove
Groove-billed Ani
Snowy Owl
Rufous Hummingbird
Say's Phoebe
Vermilion Flycatcher
Variegated Flycatcher

Garganey
Cinnamon Teal
Eurasian Wigeon
King Eider
Harlequin Duck
Black Scoter
Barrow's Goldeneye
Masked Duck
American Swallow-tailed Kite
Northern Goshawk
Swainson's Hawk
Prairie Falcon
Yellow Rail
Black Rail
Limpkin
Snowy Plover
Black-necked Stilt (except Shelby Co.)
Whimbrel
Long-billed Curlew
Hudsonian Godwit
Marbled Godwit
Purple Sandpiper
Ruff
Red-necked Phalarope
Red Phalarope
Pomarine Jaeger
Parasitic Jaeger
Western Kingbird
Scissor-tailed Flycatcher
Brown-headed Nuthatch (except Chattanooga area)
Rock Wren
Sprague's Pipit
Northern Shrike
Bell's Vireo
Black-throated Gray Warbler
Kirtland's Warbler
Western Tanager
Black-headed Grosbeak
Painted Bunting (except Shelby Co.)
Green-tailed Towhee
Bachman's Sparrow
Clay-colored Sparrow
Lark Bunting
Henslow's Sparrow
Sharp-tailed Sparrow
Harris' Sparrow
Smith's Longspur
Western Meadowlark (except WCPR)
Yellow-headed Blackbird
White-winged Crossbill
Common Redpoll

FORMAT FOR SUBMISSION OF BIRD RECORDS FOR SEASON REPORTS

Observers who submit bird data for publication in *The Migrant* and *American Birds* will want to follow the guidelines noted below in order to assure themselves that the data have been properly presented. What is commonly called a "bird record" contains the five essential items of information listed earlier in this paper. Because the compilers for "The Season" receive a voluminous set of data each reporting season, it is important that they are able to synthesize all of the submitted records as efficiently as possible into a concise and accurate season report. Efficiency in this process can only be achieved if the compilers receive the raw data in a format which they are accustomed to use.

Currently there are two recognized reporting formats which may be used to submit bird data. Preferred reporting format differs among the regional compilers; therefore, be sure to check the Reporting Regions and Deadlines section of this article to know which format to use in submitting records to a particular compiler.

Tabular Format

When using this format (Figure 3), observers should type or neatly print records on 8½″ x 11″ white, plain paper as follows:

Observer: John C. Robinson, P.O. Box 215, Dover, TN 37058
STATE AND REGION: Tennessee, Western Coastal Plain Region
OBSERVATION PERIOD: Spring 1986
OTHER OBSERVERS: Stephen J. Stedman (SJS)

SPECIES	No.	DATE	LOCATION, COMMENT, OTHER OBSERVERS
Common Loon	21	23 March	Pace Point, Henry Co.; peak #
Common Loon	3	4 May	Paris Landing State Park (PLSP), Henry Co; departure
Horned Grebe	24	8 March	PLSP, Henry Co.; peak #
Horned Grebe	1	10 April	PLSP, Henry Co.; departure
Double-crested Cormorant	4	29 March	PLSP, Henry Co.; arrival
Double-crested Cormorant	1	4 May	PLSP, Henry Co.; departure
Snowy Egret	12	17 May	Lake County, 2-3 mi. sw of Ridgely; peak #; all birds with golden-yellow feet, thin black bills and black legs
Little Blue Heron	1	30 March	Dyer Co., Mississippi River levee; arrival; SJS additional observer
Laughing Gull	1	9 May	Island 13, Lake Co.; SEE DOCUMENTATION

Figure 3. Sample field report in tabular format (part of a page only shown).

1. At the top of the first page, write in full name and address, reporting season, year, and region in Tennessee covered by said report.
2. On successive pages, place at the top the following information: observer's last name/season and year/page number of report.
3. List, from left to right, the following four column headings on each page: *Species, Number, Date,* and *Location, Comment, Other Observers.*
4. Enter one record per line, giving information for each of the indicated column headings.
5. Species in the "Rare" and "Very Rare" categories should be reported on this list with supplementary information being recorded on properly completed green "Unusual Sighting" cards or Rare Bird Reporting Forms, respectively.

Green Card Format

When using this format, observers should place *all* bird sightings on green cards (Figure 4). Observers should ensure that these cards are completely filled out for species in the "Rare" category; for very rare species a green card *and* a Rare Bird Reporting Form should be properly completed for each sighting.

Style

The order and names of the species reported as records should follow the 6th edition of the A.O.U. Check-List, as represented in the most recent field check-lists distributed free by TWRA. All dates should appear in continental form (i.e., 25 June 1986). If the number of individuals which were seen is an approximation, it is best to round off to the nearest 10 or 100 or to use a +/- notation; otherwise, report the number you actually counted. The exact location, including name of site and county, should be given for each

TENNESSEE WILDLIFE RESOURCES AGENCY
Nongame and Endangered Species

UNUSUAL SIGHTING: BY SPECIES, CONCENTRATION OR BEHAVIOR

Species Le Conte's Sparrow Date 8 February 1987
County Stewart Exact location Adjacent to Elk Creek Reservoir, Cross Creeks National Wildlife Refuge, 3½ miles east of Carlisle, Tennessee
No. Individuals Observed 1 Sex Unknown Age Unknown
Field marks or behavior observed Flight was weak and short; golden-yellow eyestripe, malar stripe and upper breast were visible on perched bird; white central crown streak noted. White belly. Back and nape of neck streaked. Flushed from waist-high foxtail grass.
Observer(s) John C. Robinson
Other Documentation None
Submitted by John C. Robinson Organization U.S. Fish and Wildlife Service
Address P.O. Box 215
Dover, Tennessee 37058 Date 8 February 1987

WR-0515 (Rev. 10-85)

Figure 4. Sample "Unusual Sighting" (green) card properly filled out.

sighting. Be sure to state the county in which the bird was seen for each record. If observers other than yourself were present when the bird was observed, indicate their names. Abbreviations for names and places may be used in one set of records after the first, fully spelled out, usage.

Observers can make the regional compiler's job of interpreting the data considerably easier by stating whether the observation represents an early arrival, a late departure, a peak number, an unusually high or low concentration, a vagrant, a male, a female, adult, immature, etc., a range expansion or contraction, a bird someone else found or a species which was photographed or formally documented on a green card or Rare Bird Reporting Form. Tables, field check-lists, and other non-standard or extraneous materials should only be submitted in addition to, rather than in replacement for, the standard reporting materials.

What Needs to be Reported

Not every species observed during a reporting season needs to be reported, as the primary emphases of the reports published in *The Migrant* and *American Birds* are on changes in the distribution and numbers of bird populations. Records which should be submitted include the following for each season of the year:

1. Spring
   a. First and last sighting of transients.
   b. First sighting of summer residents.
   c. Last sighting of winter residents.
   d. Maximum number for 1 day in 1 county.
   e. Unusual or rare species.
   f. Unusual behavior or habitat use.

2. Summer
   a. For all species, the maximum number seen in 1 county in 1 day (or at 1 site in 1 county).
   b. Positive breeding evidence for uncommon or rare species.
   c. Unusual or rare species/behavior/habitat.
   d. Breeding earlier or later than normal.
3. Fall
   a. First and last sightings of transients.
   b. First sighting of winter residents.
   c. Last sighting of summer residents.
   d. Maximum number for 1 day in 1 county.
   e. Unusual or rare species.
   f. Unusual behavior or habitat use.
4. Winter
   a. Maximum number for 1 day in 1 county.
   b. Unusual or rare species/behavior/habitat use.
5. All seasons
   a. All records of endangered species.
   b. Any records which an observer feels should be noted.

REPORTING REGIONS AND DEADLINES

Tennessee has been divided into four physiographic regions for the purposes of reporting bird records (Figure 5).

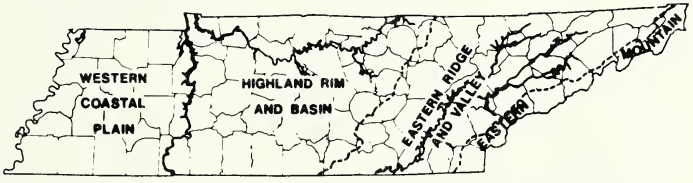

Figure 5. Regions of state for reporting bird records.

Reports from each region are written by the following compilers, whose format requirements for submission of records are also noted:

Region	Compiler/Address	Preferred Reporting Format
Western Coastal Plain	Martha G. Waldron 1626 Yorkshire Dr. Memphis, TN 38119	Tabular
Highland Rim and Basin	Stephen J. Stedman Dept. of English Tennessee Tech. Univ. P.O. Box 5053 Cookeville, TN 38505	Green Cards
Eastern Ridge and Valley	Richard L. Knight 804 North Hills Dr. Johnson City, TN 37601	Tabular

Eastern Mountain	Glen D. Eller Rt. 9, Box 1340 Elizabethton, TN 37643	Tabular

In addition, bird records are reported to *American Birds* by the following subregional editors, to whom important bird records should also be submitted:

Western Coastal Plain	Ben B. Coffey, Jr. 672 North Belvedere Memphis, TN 38107
Highland Rim and Basin	Stephen J. Stedman Dept. of English Tennessee Tech. Univ. P.O. Box 5053 Cookeville, TN 38505
Eastern Ridge and Valley	Several local subregional editors
Eastern Mountain	Glen D. Eller Rt.9, Box 1340 Elizabethton, TN 37643

Those who wish to submit records for publication are asked to meet the reporting deadlines listed below:

Season	Inclusive Dates	Deadline
Spring	1 March-31 May	12 June
Summer	1 June-31 July	12 August
Fall	1 August-30 November	12 December
Winter	1 December-29 February	12 March

All reports, including any documentation forms, green cards, or photographs, should be received by the regional compilers by these due dates. All documents should indicate the observer's name, address, reporting season, and year.

SUMMARY

Methods for documenting and submitting bird records in Tennessee are described. These methods stress the importance of maintaining an orderly system of personal records and properly documenting all rare or unusual species encountered in the field. Documentation of an unusual species ranges from a brief description of the bird for 18 hard-to-identify species to a description of the sighting on a green "Unusual Sighting" card for 34 rare species to a complete account of the observation on a TOS Rare Bird Reporting Form for 83 very rare species. The elements of the Rare Bird Reporting Form are discussed item by item to highlight the manner in which the documentation data should be presented.

The 2 formats currently recognized for submitting bird records are described. The tabular format uses white, plain paper of said dimensions to report observations, in list form, under four headings. Rare and very rare species are reported in this list with supplementary information being recorded on properly completed green "Unusual Sighting" cards or Rare

Bird Reporting Forms, respectively. The green card format utilizes the green "Unusual Sighting" cards available from the Tennessee Wildlife Resources Agency to report all species, with very rare species being additionally reported on a Rare Bird Reporting Form.

The style for recording names, dates, numbers, locations, and supplementary information for all bird records submitted is discussed. While not every species observed during a reporting season needs to be reported, a general overview of the bird records which ideally should be submitted is presented. The compilers of "The Season" report, which appears in each issue of this journal, are identified along with the reporting format in which they prefer to receive submitted bird records. In addition, those individuals responsible for forwarding notable records from each of the 4 regions of the state to *American Birds* are identified. Reporting deadlines for submission of records to compilers of "The Season" are noted. All observers are encouraged to prepare a Round Table Note for very rare species they have identified; Round Table Notes should be submitted to the current editor for *The Migrant.*

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Dept. of English, Tenn. Tech. Univ., P.O. Box 5053, Cookeville, TN 38505 (Stedman) and P.O. Box 215, Dover, TN 37058 (Robinson). Accepted 25 July 1987.

1987 SPRING FIELD DAYS

DAMIEN J. SIMBECK

A total of 220 species were found on 13 counts in 1987. This total ties 1984 and 1986 totals as second all time highs. Most unusual were Oldsquaw, Peregrine Falcon (2 counts), Franklin's Gull, and Bachman's Sparrow (first since 1977). As in past years, many unusual species were submitted without details. In the future, compilers should require a written description of all unusual species from the observers, and include a copy with their count summary.

INFORMATION ON THE COUNTS

MEMPHIS — 2 May; chiefly A.M.; cloudy, some rain; Ensley, Shelby Bottoms, and 2 parties Meeman-Shelby Forest State Park. TOS Spring Meeting. Ben B. Coffey Jr. (compiler — 672 N. Belvedere, Memphis 38107).

HATCHIE NWR — 3 May; 0820-1130; cloudy, windy; 3 parties; Ben B. Coffey Jr. (compiler).

MONTGOMERY CO. — 2-3 May; 48 hours; clear; 60-80° F; 8 observers; Joe Allen, Michael and Joetta Dinsmore, Annie Heilman, Nancy Hughes, Louise Podell, John Quick (compiler — Rt. 1 Box 114B, Cunningham 37052), Ellen Walker.

LAWRENCEBURG — 9 May; 0430-2030; clear, warm; 47-85° F; 25 party hours; 10 observers in 6 parties; Michael Beuerlein, David Chaffin, Fran and Robert Claudy, Helen and Lloyd M. Clayton, Daphnie Griggs, Johnny Parks, Damien (compiler — Rt. 2 Box 3A, Loretto 38469) and Don Simbeck. Good details on Mississippi Kite. Bachman's Sparrows were at the Fall River site, Giles Co. (2m, 1f).

COLUMBIA — 24-25 April; clear; wind NW 5-15 mph; 46-75° F; 11 observers. George R. Mayfield Jr. (compiler — 999 Sunnyside Dr., Columbia 38401). Good details on Sanderling submitted to and accepted by GRM.

NASHVILLE — 9-10 May; about 45 observers; Jerry Drewry (compiler). 6 *Empidonax* sp. reported.

WILSON CO. — 9-10 May; clear; 50-85° F; Kay Norris (compiler — 1609 Ponderosa Trail, Lebanon 37087). Good details submitted for most unusual species. Swainson's (1) and Mourning (1) Warblers deleted — details insufficient.

MURFREESBORO — 9-10 May; Sat.-sunny; 50-84° F; Sun.-sunny; 57-85° F; 34 (?) hours, 275 miles (5 on foot, 260 by car, 10 by boat); 15 observers; Josephine Cantrell, Bill and Low Erwin, C.E. Greever, Edith Hayes, Betty Herring, Anne (compiler — 1018 Lawndale, Murfreesboro, 37130) Anne and Bob Hettish, David McCarroll, Ruth McMillan, Gene and Ruth Odom, John Patten, Alberta Spence, Terry Witt.

HIGHLAND RIM — 25 April.

CHATTANOOGA — 25-26 April; Nickajack Dam to Hiwassee R.; Sat. — Partly cloudy, wind N-NE 9-21 mpl, temp. 50-73° F; Sun. — Mostly sunny, wind light and var., temp. 46-80° F; 7 observers — Del Blum, Ken and Lil Dubke, Albert Jenkins, Jonnie Sue Lyons, Johnny Parks (compiler — 1610 E. 17th St., Chattanooga 37404), Robin Rudd.

1987 SPRING FIELD DAYS

	Memp	Hatc	Mont	Lawr	Colu	Nash	Wils	Murf	High	Chat	Knox	Gree	Eliz
Common Loon	--	--	--	--	--	1	--	1	3	29	--	--	22
Pied-billed Grebe	1	--	1	--	4	8	1	--	--	6	1	--	3
Double-cr. Cormorant	5	--	--	--	--	2	34	--	--	14	36	--	--
American Bittern	--	--	--	--	--	--	--	--	--	--	--	1	--
Great Blue Heron	2	12	2	--	6	3	2	3	10	54	6	4	5
Great Egret	--	--	--	--	--	--	--	--	--	1	--	--	--
Snowy Egret	1	--	--	--	--	--	--	--	--	--	--	--	--
Little Blue Heron	5	1	--	--	--	--	--	--	--	1	--	--	--
Cattle Egret	8	--	--	1	--	--	1	1	--	--	--	--	1
Green-backed Heron	5	6	2	6	9	16	11	5	2	4	18	3	8
Black-cr. Night-Heron	--	--	--	--	--	32	6	3	--	1	--	--	--
Yellow-cr. Night-Heron	3	1	1	--	--	4	1	--	--	4	--	2	1
Canada Goose	--	22	--	32	72	575	166	30	171	112	11	56	37
Wood Duck	6	17	19	3	21	62	8	12	8	24	57	27	55
Green-winged Teal	1	--	--	--	--	--	--	--	--	--	--	--	--
American Black Duck	--	--	--	--	--	--	--	--	2	--	--	--	--
Mallard	7	--	--	--	12	44	34	12	8	12	--	16	47
Blue-winged Teal	24	1	8	--	32	6	--	--	6	26	2	11	55
Northern Shoveler	--	--	--	--	--	--	--	--	--	4	--	--	--
Gadwall	--	--	--	--	2	--	--	--	5	--	--	--	--
American Wigeon	--	--	--	--	--	--	--	--	--	--	--	--	2
Redhead	--	--	--	--	1	--	--	--	--	--	--	--	--
Ring-necked Duck	--	--	--	--	2	--	--	--	--	1	--	--	1
Greater Scaup	--	--	--	--	--	--	--	--	--	--	--	--	16
Lesser Scaup	--	--	--	--	1	--	--	--	--	2	--	--	6
Oldsquaw	--	--	--	--	--	--	--	--	--	--	--	--	1
Bufflehead	--	--	--	--	--	--	--	--	--	--	--	--	3
Hooded Merganser	--	3	--	--	--	--	--	--	--	3	--	--	4
Red-breasted Merganser	--	--	--	--	--	--	--	--	--	--	--	--	2
Ruddy Duck	--	--	--	--	--	--	--	--	--	2	--	--	--
Black Vulture	--	2	3	--	35	49	50	45	20	14	4	2	3
Turkey Vulture	--	2	10	37	33	87	19	12	39	17	18	27	69
Osprey	--	--	--	--	2	4	1	1	1	8	15	2	15
Mississippi Kite	3	--	--	1	--	--	--	--	--	--	--	--	--
Bald Eagle	--	--	1	--	--	--	--	--	--	--	--	--	--
Northern Harrier	--	--	--	--	1	--	--	--	1	--	--	--	--
Sharp-shinned Hawk	--	1	--	--	2	2	--	--	2	2	2	--	--
Cooper's Hawk	--	--	2	1	1	4	--	2	--	2	--	1	1
Red-shouldered Hawk	--	4	4	1	2	14	3	--	2	7	2	--	--
Broad-winged Hawk	--	1	--	1	3	3	--	--	2	2	15	--	2
Red-tailed Hawk	3	2	1	3	10	15	9	11	13	9	14	9	4
American Kestrel	2	--	--	1	12	22	7	32	6	1	8	9	13
Peregrine Falcon	--	--	--	--	--	1	--	--	--	--	--	--	1
Ruffed Grouse	--	--	--	--	--	--	--	--	--	--	2	--	2
Wild Turkey	1	--	--	--	5	--	--	--	--	--	--	--	--
Northern Bobwhite	6	7	19	27	34	123	26	38	21	29	28	10	5
Virginia Rail	--	--	--	--	1	--	--	--	--	--	--	--	--
Sora	5	1	--	1	7	2	--	--	--	1	4	--	4
American Coot	--	--	2	1	18	1	1	--	--	111	2	--	4
Lesser Golden-Plover	9	--	--	--	--	--	--	--	--	--	--	--	--
Semipalmated Plover	6	1	--	3	1	21	3	--	--	--	--	--	--
Killdeer	75	5	1	12	33	107	38	50	21	18	44	8	32
Black-necked Stilt	4	--	--	--	--	--	--	--	--	--	--	--	--
Greater Yellowlegs	3	4	--	1	1	2	--	--	--	25	--	--	13
Lesser Yellowlegs	21	1	--	3	7	2	3	6	24	19	1	--	31
Solitary Sandpiper	16	12	--	2	18	4	4	3	20	19	21	12	60
Spotted Sandpiper	5	7	1	2	1	17	6	4	3	22	11	3	11
Upland Sandpiper	--	--	--	--	--	--	--	--	--	1	1	--	--
Sanderling	--	--	--	--	1	--	--	--	--	--	--	--	--
Semipalmated Sandpiper	5	--	--	--	4	19	--	--	--	--	--	--	--

	Memp	Hatc	Mont	Lawr	Colu	Nash	Wils	Murf	High	Chat	Knox	Gree	Eliz
Least Sandpiper	25	1	5	3	--	103	9	11	5	--	--	--	--
White-rumped Sandpiper	5	--	--	--	--	--	--	--	--	--	--	--	--
Pectoral Sandpiper	281	3	--	2	1	--	--	--	--	16	--	--	3
Dunlin	--	--	--	--	--	--	--	--	3	--	--	--	--
Common Snipe	1	--	--	--	1	1	--	--	2	3	4	2	17
American Woodcock	--	--	--	--	2	7	--	--	2	--	1	2	--
Franklin's Gull	3	--	--	--	--	--	--	--	--	--	--	--	--
Bonaparte's Gull	--	--	--	--	--	--	--	--	--	8	--	--	--
Ring-billed Gull	18	--	--	--	--	80	29	--	8	30	43	--	55
Herring Gull	--	--	--	--	--	1	2	--	--	--	--	--	--
Caspain Tern	2	--	--	--	--	--	--	--	--	1	--	--	--
Common Tern	--	--	--	--	--	--	--	--	--	1	--	--	--
Forster's Tern	--	--	--	--	--	3	--	--	--	2	--	--	1
Least Tern	2	--	--	--	--	--	--	--	--	--	--	--	--
Rock Dove	1	1	14	17	31	116	25	30	28	38	62	87	103
Mourning Dove	13	5	57	82	65	318	132	600	53	103	228	130	202
Black-billed Cuckoo	--	--	--	--	--	--	4	--	--	--	--	--	--
Yellow-billed Cuckoo	3	1	1	2	--	41	18	18	--	2	1	--	--
Eastern Screech-Owl	1	--	--	1	6	6	4	2	--	16	6	1	6
Great Horned Owl	--	--	1	1	7	5	2	3	3	3	15	1	1
Barred Owl	--	2	3	1	9	11	6	--	--	3	13	--	--
Common Nighthawk	1	--	3	1	--	21	4	16	--	5	3	--	--
Chuck-will's-widow	--	--	1	15	--	2	6	6	1	--	32	--	--
Whip-poor-will	--	--	2	32	6	22	9	7	1	--	2	1	--
Chimney Swift	21	12	56	26	53	330	85	199	109	124	269	52	456
Ruby-thr. Hummingbird	11	23	6	4	8	38	7	6	8	6	6	--	2
Belted Kingfisher	3	1	2	3	12	22	15	5	--	13	28	3	28
Red-headed Woodpecker	8	14	--	3	11	21	--	3	6	8	--	--	--
Red-bellied Woodpecker	18	23	35	13	60	98	35	27	10	27	71	16	20
Yellow-bel. Sapsucker	--	--	--	--	1	1	2	2	--	--	2	--	--
Downy Woodpecker	9	9	10	5	43	58	18	16	14	15	38	20	32
Hairy Woodpecker	--	2	1	3	10	16	6	7	2	3	10	6	--
Northern Flicker	7	4	5	3	13	23	6	43	12	8	44	19	34
Pileated Woodpecker	4	5	7	6	10	32	6	4	4	17	25	7	24
Olive-sided Flycatcher	--	--	--	--	--	1	--	--	--	--	--	--	--
Eastern Wood-Pewee	6	10	13	16	8	83	16	6	--	6	1	--	--
Acadian Flycatcher	14	22	6	3	1	2	--	--	--	2	--	--	--
Willow Flycatcher	--	--	--	--	--	5	--	--	--	--	--	--	--
Least Flycatcher	--	--	2	1	--	1	--	1	--	--	--	--	--
Eastern Phoebe	--	--	16	7	12	35	25	4	13	20	29	6	20
Great Cr. Flycatcher	5	20	12	19	14	60	20	19	6	5	13	2	1
Eastern Kingbird	9	8	18	13	16	93	65	79	7	9	24	10	10
Horned Lark	8	--	--	--	--	--	--	--	--	8	1	--	--
Purple Martin	5	--	50	23	29	104	91	148	21	94	60	9	97
Tree Swallow	--	3	--	1	29	7	2	--	--	40	12	18	61
N. Rough-winged Swallow	9	--	30	7	115	236	10	6	13	45	50	59	1050
Bank Swallow	--	--	--	--	12	20	--	6	--	55	1	--	6
Cliff Swallow	--	--	250	6	--	1847	--	--	24	142	--	--	2
Barn Swallow	16	35	36	85	57	411	117	99	94	113	153	96	1080
Blue Jay	41	14	53	21	113	112	137	68	69	152	314	107	202
American Crow	8	24	36	28	92	172	79	91	44	254	241	114	182
Fish Crow	2	--	--	--	--	--	--	--	--	--	--	--	--
Common Raven	--	--	--	--	--	--	--	--	--	--	--	--	1
Carolina Chickadee	16	28	17	6	69	129	44	54	20	69	157	69	66
Tufted Titmouse	21	33	55	14	73	124	46	45	36	41	117	71	63
Red-breasted Nuthatch	--	--	--	--	--	--	--	--	--	--	6	--	--
White-breasted Nuthatch	--	5	3	19	5	33	2	--	15	6	12	2	14
Brown-headed Nuthatch	--	--	--	--	--	--	--	--	--	2	--	--	--
Brown Creeper	--	--	--	--	--	--	--	--	--	--	--	--	1
Carolina Wren	19	34	35	12	65	109	20	26	13	53	167	40	85
Bewick's Wren	--	--	--	--	2	--	2	3	--	--	--	--	--
House Wren	--	--	7	1	3	15	15	13	--	--	18	2	7
Winter Wren	--	--	--	--	--	--	--	--	--	2	3	--	--
Sedge Wren	--	--	--	--	--	1	--	--	1	--	1	--	--
Marsh Wren	--	1	--	--	--	1	--	--	1	--	1	--	--

	Memp	Hatc	Mont	Lawr	Colu	Nash	Wils	Murf	High	Chat	Knox	Gree	Eliz
Golden-crowned Kinglet	--	--	--	--	--	--	--	--	--	--	1	--	--
Ruby-crowned Kinglet	1	1	--	--	3	1	--	--	5	2	68	8	20
Blue-gray Gnatcatcher	33	43	20	14	61	137	7	7	12	132	119	13	33
Eastern Bluebird	6	2	29	34	73	158	325	101	49	167	45	43	30
Veery	--	1	1	2	--	7	1	2	--	--	--	--	--
Gray-cheeked Thrush	1	1	--	--	--	4	2	--	--	--	1	1	--
Swainson's Thrush	15	16	8	7	1	86	4	10	--	--	5	--	1
Hermit Thrush	--	--	--	--	1	1	--	--	--	3	--	--	1
Wood Thrush	17	27	13	7	10	41	4	3	3	12	63	--	22
American Robin	73	5	105	28	125	456	189	145	201	137	360	102	380
Gray Catbird	3	9	4	12	2	37	10	19	2	8	2	--	2
Northern Mockingbird	9	4	49	26	47	150	81	119	46	98	77	29	55
Brown Thrasher	7	3	18	20	38	61	59	21	37	33	44	11	17
Water Pipit	--	--	--	--	--	--	--	--	--	--	3	--	65
Cedar Waxwing	30	--	--	--	--	71	32	25	--	--	80	--	14
Loggerhead Shrike	3	--	5	18	3	30	2	11	2	1	--	--	1
European Starling	10	10	65	150	426	535	262	900	22	521	411	388	898
White-eyed Vireo	14	16	26	14	85	99	8	13	5	45	32	3	5
Solitary Vireo	--	--	1	--	--	1	3	--	--	15	17	--	13
Yellow-throated Vireo	--	8	5	1	6	25	1	--	--	--	22	2	1
Warbling Vireo	1	--	1	--	4	30	1	--	--	--	--	--	--
Philadelphia Vireo	1	1	--	1	--	2	4	--	--	--	--	--	--
Red-eyed Vireo	16	23	32	23	38	77	11	25	10	139	160	--	10
Blue-winged Warbler	--	--	4	7	8	15	--	--	--	4	5	--	3
Golden-winged Warbler	--	--	--	--	--	3	1	--	--	1	9	--	--
Tennessee Warbler	14	18	37	2	11	81	1	10	2	26	12	--	3
Nashville Warbler	2	1	--	--	4	4	1	--	--	1	9	--	--
Northern Parula	20	38	--	3	8	27	--	--	--	4	5	--	3
Yellow Warbler	--	1	4	1	44	40	10	8	2	24	18	1	12
Chestnut-sided Warbler	--	2	1	1	--	13	2	--	--	2	3	--	4
Magnolia Warbler	1	--	--	1	2	19	--	1	--	--	2	--	--
Cape May Warbler	--	--	--	--	1	6	1	--	--	5	3	--	--
Black-thr. Blue Warbler	--	--	--	--	--	--	1	2	--	--	3	--	1
Yellow-rumped Warbler	--	3	1	2	133	25	8	4	22	73	258	39	261
Black-thr. Green Warbler	--	--	1	--	5	12	1	--	3	4	35	--	17
Blackburnian Warbler	--	1	--	--	1	8	4	--	--	--	18	--	2
Yellow-throated Warbler	--	6	--	3	17	26	1	2	2	12	17	5	4
Pine Warbler	--	--	--	6	3	10	1	1	--	33	14	--	3
Prairie Warbler	--	1	26	22	35	17	17	2	5	11	14	--	2
Palm Warbler	3	2	1	--	76	7	2	7	6	26	19	8	4
Bay-breasted Warbler	--	--	2	--	1	34	1	--	--	5	--	--	--
Blackpoll Warbler	2	3	4	2	2	43	7	5	--	11	9	--	--
Cerulean Warbler	11	7	--	--	6	15	5	--	1	7	37	--	1
Black & White Warbler	2	2	3	3	6	11	1	5	4	15	42	2	20
American Redstart	4	42	--	1	4	20	--	1	--	--	5	1	1
Prothonotary Warbler	13	54	8	1	9	29	13	2	--	2	3	--	--
Worm-eating Warbler	4	1	1	--	4	13	--	--	1	13	31	--	4
Swainson's Warbler	4	11	--	--	--	1	--	--	--	1	--	--	--
Ovenbird	2	2	--	--	5	23	1	--	2	4	30	--	16
Northern Waterthrush	1	3	--	--	--	10	12	5	--	--	1	--	--
Louisiana Waterthrush	4	2	2	5	9	15	4	3	3	2	--	--	7
Kentucky Warbler	25	16	12	5	17	43	4	1	--	4	10	--	1
Connecticut Warbler	--	--	--	--	--	--	2	--	--	--	--	--	--
Mourning Warbler	--	1	--	--	--	1	--	--	--	--	--	--	--
Common Yellowthroat	7	51	19	18	37	202	28	18	9	42	65	8	6
Hooded Warbler	6	1	1	2	10	12	1	2	1	7	49	--	8
Canada Warbler	--	--	--	--	--	4	--	--	--	--	1	--	--
Yellow-breasted Chat	4	8	12	30	10	46	9	15	2	15	6	--	1
Summer Tanager	14	14	13	15	16	60	15	11	4	3	5	1	--
Scarlet Tanager	6	2	6	10	10	25	1	1	5	9	35	1	8
Northern Cardinal	47	45	165	69	161	408	157	76	70	194	368	119	188
Rose-breasted Grosbeak	12	11	6	3	--	22	3	1	5	6	17	--	2
Blue Grosbeak	8	2	--	4	2	14	7	4	1	23	8	--	--
Indigo Bunting	34	115	37	39	27	352	105	59	6	80	45	1	3
Painted Bunting	2	--	--	--	--	--	--	--	--	--	--	--	--

	Memp	Hatc	Mont	Lawr	Colu	Nash	Wils	Murf	High	Chat	Knox	Gree	Eliz
Dickcissel	6	1	12	12	--	11	--	15	--	--	--	--	--
Rufous-sided Towhee	10	7	56	19	83	124	24	52	17	34	94	31	67
Bachman's Sparrow	--	--	--	3	--	--	--	--	--	--	--	--	--
Chipping Sparrow	3	1	17	7	30	72	12	9	14	22	57	21	63
Field Sparrow	--	--	16	29	45	97	39	28	13	96	116	25	31
Lark Sparrow	--	--	--	--	--	3	--	--	--	--	--	--	--
Savannah Sparrow	4	2	--	--	9	12	--	--	--	10	41	--	15
Grasshopper Sparrow	--	--	--	1	--	5	1	--	--	17	8	--	2
Fox Sparrow	--	--	--	--	--	--	--	--	--	1	--	1	--
Song Sparrow	--	--	--	1	5	48	--	22	6	88	229	48	200
Lincoln's Sparrow	2	2	--	--	--	4	--	1	--	--	--	--	--
Swamp Sparrow	2	4	--	--	24	8	2	--	6	11	14	--	4
White-throated Sparrow	7	1	20	1	83	17	1	9	49	35	235	102	85
White-crowned Sparrow	1	--	1	--	50	--	1	--	2	8	14	11	22
Dark-eyed Junco	--	--	--	--	--	--	--	--	2	--	--	1	8
Bobolink	7	--	--	20	--	16	--	220	--	2	4	--	--
Red-winged Blackbird	85	27	110	85	355	898	99	1500	100	168	375	117	259
Eastern Meadowlark	40	7	62	75	117	336	121	1000	94	317	133	114	194
Rusty Blackbird	--	--	--	--	--	--	--	--	--	8	--	--	2
Common Grackle	45	81	123	110	260	343	200	160	147	127	381	379	1011
Brown-headed Cowbird	40	29	63	35	1133	306	126	36	30	35	125	60	62
Orchard Oriole	5	7	7	12	12	101	22	21	8	13	9	1	--
Northern Oriole	3	3	3	--	--	17	2	1	--	--	1	--	--
Purple Finch	--	--	4	--	--	1	9	--	2	--	15	14	28
House Finch	6	--	1	--	--	10	6	16	4	14	7	30	41
Red Crossbill	--	--	--	--	--	--	--	--	--	--	--	--	9
Pine Siskin	--	--	21	--	80	33	24	--	4	33	104	71	78
American Goldfinch	11	101	191	44	134	261	81	66	93	87	335	129	908
Evening Grosbeak	--	--	--	--	20	1	--	--	33	4	113	110	284
House Sparrow	6	6	77	125	37	151	93	550	44	86	65	36	80
Total Species	123	112	106	114	136	163	133	110	105	149	141	87	139

KNOXVILLE — 26 April; clear to partly cloudy; wind 3-12 mph; temp. 45-72° F; 124 party hours; 33 observers in 19 parties; Mark and Laurie Armstrong, Frank Bills, Sharon Bostick, Jim and Betty Reid Campbell, Howard Chitwood, Bob Collier, Jim Davis, Marcia Davis, Barry Fleming, Lou Fuller, Brice Gilmer, Paul Hartigan, Ron and Audrey Hoff (compilers-4523 McCloud Rd., Knoxville 37938), Joe Howell, Susan Hoyle, Tony Koella, Beth Lacy, Chuck Nicholson, Truett Patterson, Don Powers, Mark Reeves, Kenneth and Mable Sanders, Boyd Sharp, James Tanner, Michael Tenbos, Alice and Dave Torbett, Stuart Van Meter, Ralph Zaenglein. Good details submitted for Upland Sandpiper, Marsh and Sedge Wrens.

GREENEVILLE — 25 April; cloudy and rainy, temp. 48-63° F; 44 party hours, 245.5 party miles; 22 observers; Tio and Violet Carlos, Cynthia and Herb Cragin, King and Margaret Gaut, Juanita and Lenard Heckert, Jim Holt, Tommy Jeffers, Jim Luedke, Jr., Daniel and Terry Nieves, Richard and Willie Ruth Nevius, Doug Ratledge, Helen Reed, Jo Anne Routledge (compiler — 1218 Woodhaven Lane, Greenville 37732), Helen and Royal Spees, George and Jean Weaver. Common Merganser (1) deleted-no details. Monk Parakeet (1) deleted-no details and unknown origin.

ELIZABETHTON — 25 April; 0430-2130; temp. 44-52° F; 19 observers in 7 parties; Glen Eller (compiler — Rt. 9 Box 1340, Elizabethton 37643). Old-squaw was in summer plumage. Peregrine Falcon seen by 2 parties.

ROUND TABLE NOTES

1985 TOWER CASUALTIES AT WSMV, NASHVILLE, TENNESSEE — Collections of casualty birds at the WSMV television tower, Nashville, Davidson County, Tennessee, continued in 1985 as during past years. The area about the tower was monitored early in the morning of 20 and 28 August, each day during September and October, and 3 and 10 November. Dead birds and parts of birds were picked up, identified, counted and used for various studies. Following is a list of dead birds salvaged from the area and assumed to be casualties of impact with the tower or its guy wires:

1 SORA, 15 September; 1 AMERICAN COOT, 26 October; 1 MOURNING DOVE, 16 October; 27 YELLOW-BILLED CUCKOOS, 20 August through 16 October; 1 COMMON NIGHTHAWK, 1 September; 2 RED-BREASTED NUTHATCHES, 15 September, 16 October; 2 SEDGE WRENS, 3 and 20 October; 2 GOLDEN-CROWNED KINGLETS, 20 October and 5 November; 1 RUBY-CROWNED KINGLET, 5 November; 1 WOOD THRUSH, 13 October; 1 AMERICAN ROBIN, 1 September; 1 GRAY CATBIRD, 25 October; 2 RED-EYED VIREOS, 11 September; 3 TENNESSEE WARBLERS, 25 September, 13 and 16 October; 1 ORANGE-CROWNED WARBLER, 13 October; 1 MAGNOLIA WARBLER, 2 October; 1 YELLOW-RUMPED WARBLER, 16 October; 3 BLACK-THROATED GREEN WARBLERS, 2 on 13 October and 1 on 23 October; 3 BAY-BREASTED WARBLERS, 12 September, 3 and 13 October; 2 BLACK-AND-WHITE WARBLERS, 25 and 28 September; 1 AMERICAN REDSTART, 11 September; 3 OVENBIRDS, 11 and 21 September, 16 October; 1 YELLOW-BELLIED CHAT, 8 September; 2 ROSE-BREASTED GROSBEAKS, 23 and 28 October; 1 INDIGO BUNTING, 23 October; 1 WHITE-THROATED SPARROW, 20 October; 1 unidentified, 3 November.

Except for Yellow-billed Cuckoos, notably few migrants were recovered as casualties, suggesting that thrushes, vireos, warblers and other nocturnal migrants flew high and wide of the tower. The total of 67 birds collected at WSMV in 1985 is a low count but comparable with totals from some recent years. For example, there are 56 casualties in 1973, 67 in 1974, and 93 in 1977. Further comparisons showed 435 birds collected in 1975 and 292 in 1976. By contrast, in the late 1960s, several disastrous totals ran to more than 1,000 per year (see Migrant, 55:3, 55, 1984).

Only 7 coots have been collected in years prior to 1985, when 1 was collected. The nighthawk found on 1 September was the first record ever for this species at WSMV. Four previous records from the ceilometer and WSIX (now WKRN) bring the overall total for the general area to 5. Approximately 300 flying ants were found in the crop of the nighthawk collected in 1985. Twenty-seven Yellow-billed Cuckoos were collected, the highest number in the history of the project. Hamel (1987) discusses this unusually large number of cuckoo casualties. The 2 Red-breasted Nuthatches lend evidence of a notable incursion. Vireos and warblers were all but absent from the list. Only 2 Red-eyed Vireos were collected, compared to an average of 10 per year for the previous 10 years. Other comparisons of 1985 results with the average for the previous 10 years (in parentheses) are as follows: Tennessee Warbler, 3 (44); Magnolia Warbler, 1 (12); Ovenbird, 3 (23).

Over and above most factors that influence a bird kill during seasonal migrations is the force of weather. During September and October, 1985, moving weather fronts through Middle Tennessee were few and mild. Although I do not know how many dead birds were lost to nocturnal predation, the highest recovery count for a single day was 6 on 13 October. In response to my inquiry about unusual wind aloft the night before, U.S. Weather Bureau personnel responded "Lady, we didn't have any weather on the 13th."

Acknowledgements: This study is a continuing one dependent upon daily monitoring and dedicated attention to the collecting schedule. The following Tennessee Ornithological Society members rightly deserve to share in the authorship of this report: Sandra Bivens, Paul and Patrick Hamel, Ann Houk, Portia MacMillan, David Vogt and Miriam Weinstein. I thank Paul Hamel for both helping to rank the cuckoo feathers and for reviewing the report. I also thank Douglas James, Paul Parmalee and Kimberly Smith for reviewing the paper. I am grateful to Louise Jackson for typing and we are all indebted to Cliff Wade, Susan Rogers and other members of the maintenance staff at WSMV tower for granting us the privilege of monitoring the grounds around the tower.

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AN IMPROBABLE NUMBER OF YELLOW-BILLED CUCKOO CASUALTIES AT A TENNESSEE TV TOWER — A total of 27 Yellow-billed Cuckoos (*Coccyzus americanus*) was recovered from the WSMV-TV tower in Nashville, Davidson County, Tennessee, during August — November 1985. This is the largest number on record from the 25-year study of tower kills at the site, and constitutes 40% of the birds recovered from the site in 1985 (Goodpasture 1987). Previous high numbers of cuckoos were six in 1963 (Laskey 1964), five in 1965 (Laskey 1965), and four each in 1974 (Goodpasture 1975) and 1979 (Katherine A. Goodpasture, pers. comm.). The cumulative total of cuckoos recovered from the tower, 1960-1984, is 40 birds. During that period, cuckoos constituted at most 6% of the birds recovered in any one year. The enormous 1985 total suggests that conditions at the tower or among the population of migrants aloft were different from those in previous years.

The purpose of this brief note is to explore possible explanations for the unusual cuckoo mortality in 1985. I consider the following possibilities: (1) more cuckoos were in the population of migrants aloft, (2) cuckoos were more likely to strike the tower in 1985 than in previous years, (3) predation on cuckoos in the vicinity of the tower was unusually heavy in 1985, and (4) a combination of the above factors.

First, more cuckoos than normal may have been in the local population and possibly in the population of migrants aloft in 1985, because of the emergence of periodical cicadas (*Magicicada* sp.) both in middle Tennessee and to the north. Brood XIX of the 13-year periodical cicada (*Magicicada* sp.) appeared in middle Tennessee in 1985 (Michael E. Cooper, Tenn. Dept. Agriculture, pers. comm.) and Brood VIII of the 17-year periodical cicada (*Magicicada* sp.) was due to emerge in the upper Ohio River drainage as well

(USDA 1960, Simon 1979). Emergence of hordes of these insects during June likely provided food to support good reproduction among cuckoos (Nolan and Thompson 1975). Numbers of breeding Yellow-billed Cuckoos increased on the cicada plots in an Arkansas study area in 1985, during a periodical cicada emergence (Douglas A. James and Kimberly G. Smith, University of Arkansas, pers. comm.). In past cicada years, however, large falls of cuckoos were not recorded at WSMV: none following the last emergence in 1972 of Brood XIX of the 13-year periodical cicada, and 1 following the last emergence in 1970 of the very large Brood X of the 17-year periodical cicada.

I compared numbers of Yellow-billed Cuckoos recorded in Fall Bird Counts made in the Nashville area 1972-1985 (Nashville Chapter, Tennessee Ornithological Society, records) with the numbers of casualties recorded from the WSMV-TV tower. No relationship existed ($r = -0.3$, $p = 0.3$, $n = 13$). Similarly, no relationship existed between casualty numbers and Fall Bird Count numbers after the latter were standardized as a proportion of Northern Cardinal (*Cardinalis cardinalis*) numbers ($r = -0.51$, $p = 0.08$, $n = 13$). This brief analysis suggested that number of casualties is unrelated to number of birds recorded on the Fall Bird Count. Furthermore, both the number of Yellow-billed Cuckoos, and the ratio of Yellow-billed Cuckoo to Northern Cardinal numbers on Fall Bird Counts, were lower in the Nashville area in 1972 and 1985, the high-cicada-years, than they were in several non-cicada years in the interim. Two tentative inferences from this analysis are that Fall Bird Count numbers are not a satisfactory measure of Yellow-billed Cuckoo populations in the Nashville area at that season (cf. Turner and Davis 1980) and that tower casualties are not related closely to observed Yellow-billed Cuckoo populations. That more Yellow-billed Cuckoos may have been in the Nashville area in 1985 is thus not sufficient to account for the numbers of birds recorded as casualties at the WSMV-TV tower.

Second, cuckoos were probably not more likely than normal to strike the tower in 1985. The vast majority of the recoveries were detected from rectrices found beneath the tower. These remains were such that we could identify the cause of death in but a few cases. Only 5 individuals had obviously died in collision with the tower (Goodpasture pers. comm.). We were unable to determine the age of any of the cuckoos collected. Rectrices have been deposited in the collections of the Cumberland Museum, Nashville, Tennessee.

Third, predation cannot be dismissed as a cause of some of the large number of cuckoos recovered. As in years past, cats, Common Crows (*Corvus brachyrhynchos*), and a Great Horned Owl (*Bubo virginianus*) were observed in the vicinity of the tower during the data-collection period. Numerous mammal runs were apparent under the fence surrounding the tower compound. A pellet, cast probably by a Great Horned Owl, was discovered beneath the tower on 22 September 1985. Remains in the pellet consisted of parts of 4 skulls and 3 wings of 4 adult Yellow-billed Cuckoos (Paul W. Parmalee, University of Tennessee-Knoxville, pers. comm.). Based on this evidence, I believe that selective predation by owls may be a sufficient explanation for the large number of cuckoos represented in the remains recovered at the WSMV tower in 1985. The facts that the remains consisted primarily of rectrices, the pellet was cast beneath the tower, and many of the partial carcasses were found directly beneath the tower rather

than at a small distance, suggest that the owl used the tower as a perch during September and October 1985. Whether the owl(s?) brought birds to the tower site for consumption or picked up dead and injured individuals beneath the tower could not be determined. Consequently, possibilities (1) and (3) above cannot be eliminated or seperated using the available data.

This situation differs from that usually encountered in studies of bird falls at TV towers. Typically, predation by owls and other animals causes a reduction in the volume of migrants found as casualties at TV towers (Stoddard and Norris 1967). At the WSMV tower in 1985, predation by an owl or owls may well have increased the apparent number of casualties. Yellow-billed Cuckoos may have been more numerous than normal in Middle Tennessee in 1985, permitting the extensive predation by owls.

In summary, I suggest that the large number of Yellow-billed Cuckoos recovered from the WSMV-TV tower in 1985 was not simply a result of collisions with the tower. Two of the possibilities considered in this study appear to be true in part. First, Yellow-billed Cuckoos might have been more numerous in the Nashville area in 1985; and second, an owl or owls did prey upon them more heavily than has been observed in the past. The number of proven tower casualties (5) was not unusually high. Thus, at the WSMV tower in 1985, predation might have increased the apparent number of Yellow-billed Cuckoo casualties.

Acknowledgements: I am indebted to those who collected tower casualties at WSMV in 1985, to Michael Cooper for providing material on periodical cicadas, to Portia Macmillan for access to the Cumberland Museum collections, to Paul Parmalee for examining the owl pellet, to Stephen Stedman for the Fall Bird Count data, and to Katherine Goodpasture, Doug James, Paul Parmalee, and Kim Smith for reviewing the manuscript.

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— PAUL B. HAMEL, Tennessee Department of Conservation, 701 Broadway, Nashville, TN 37219-5237. Accepted 18 May 1987.

FIRST RECORD OF PARASITIC JAEGER IN TENNESSEE: ADDENDA — Since the publication of our note (Stedman and Robinson 1986) on the sighting of a Parasitic Jaeger (*Stercorarius parasiticus*) in Henry County from 6-22 October 1985, additional information about the identification of this species and about the previous history of jaegers in Tennessee has come to our attention.

Although some doubt about our identification of this bird has been expressed by Kenn Kaufman (Purrington 1986: 126), we remain confident about its identification, especially in the light of additional information now available to us. Ronald Goetz (pers. comm.) drew our attention to a key means of distinguishing Parasitic and Pomarine Jaegers (*S. pomarinus*), i.e., the light edging visible on the primaries of a sitting bird of the former, but not the latter, species, as shown in Cramp (1983: 673 and plate 64) and as noted by Jonsson (1984:444-445). An enlargement of the photograph included with our note shows light edging on the primaries of the bird.

Two correspondents provided information to us about the history of jaegers in the state. Harry C. Yeatman (pers. comm.) and Richard L. Knight (pers. comm.) offered hitherto unavailable information about the immature jaeger present at Woods Reservoir, Franklin County, in the fall of 1978. Due to conflicting identifications of that bird by experts, the sighting has been previously published as a jaeger species (Bierly 1979:21; Bierly 1980:219), though Purrington (1979:187) published it as *S. parasiticus*. Yeatman provided written documentation of his and John Kirby-Smith's 27 October 1978 sighting; calling on his considerable previous experience with the species, he identified the bird as *S. parasiticus*. Additionally, Knight provided documentation about the size of the bird, a hitherto unknown factor regarding its identity. On 23 September 1978, Knight had direct comparisons of Ring-billed Gulls (*Larus delawarensis*) and the jaeger, which was "noticeably smaller" than the gulls. Finally, close inspection of the photograph of the bird taken by Daniel R. Jacobson and published (Purrington 1979) reveals that the primaries have the light edging characteristic of *S. parasiticus*. In the light of these new data, the TOS Certification Committee voted on 7 February 1987 to accept the 16 September-27 October 1978 sighting of Parasitic Jaeger at Woods Reservoir as the first state record. Thus, the Parasitic Jaeger seen in Henry County during October 1985 constitutes the second state record.

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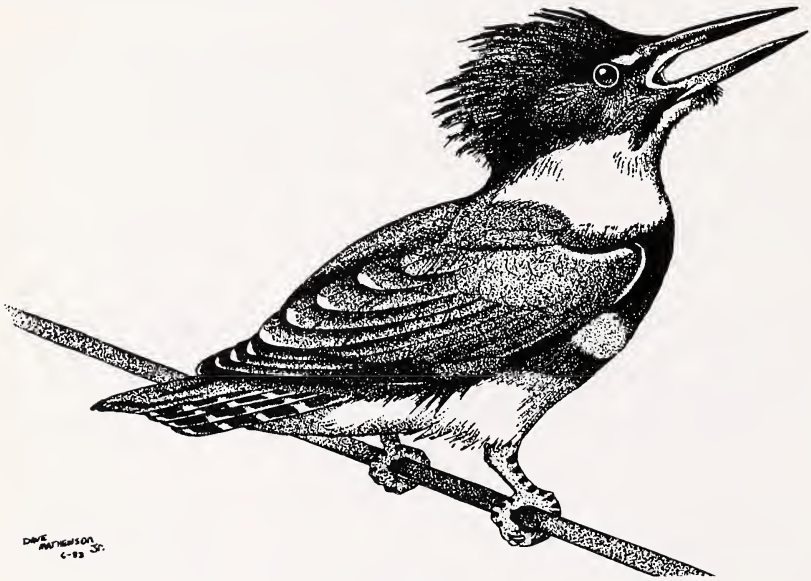
STEPHEN J. STEDMAN, Dept. of English, Tennessee Tech. Univ., P.O. Box 5053, Cookeville, TN 3505 and JOHN C. ROBINSON, P.O. Box 215, Dover TN 37058. Accepted 5 June 1987.

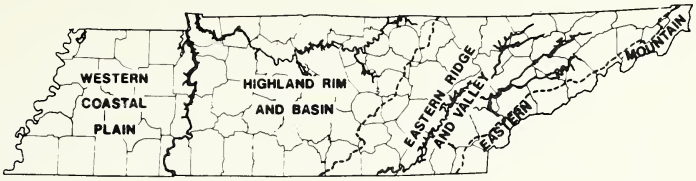


EDITORIAL NOTICE

Following the publication of the March, 1988 *Migrant*, I will be resigning from my fourth term as editor. I will be succeeded by Dr. Fred J. Alsop, III, Biological Sciences Department, East Tennessee State University, Johnson City, TN 37814. Effective now, all new manuscripts should be sent to Fred.

The lead article in this issue, on reporting bird records, is different from the material normally published in *The Migrant*. I accepted this article with some reluctance — not because of the quality of the article, which is high, but because I am afraid it will intimidate some readers. Although the procedures outlined in the article may appear complex, they are workable, and should result in a higher quantity and quality of material submitted for "The Season" and "Round Table Notes." While the "preferred reporting formats" may seem inflexible, please remember that the information reported is more important than the format. Few of the season compilers will reject records because of their format. They may, however, reject inadequately documented records. — CPN.

THE SEASON



SPRING: 1 MARCH — 30 MAY 1986

For the third spring in a row, rainfall across the state was below average. March rainfall was generally below normal and temperatures were above normal. At the end of the month, northern Middle Tennessee received a snowstorm which probably affected bird populations. April precipitation varied regionally, from below normal in the west to near or above average in the east. The weather event of the season in the eastern part of the state was the snowstorm on 3-4 April. Accumulations ranged from 3 inches at Chattanooga to 15 inches or more in upper East Tennessee. In the northern half of the region, the snow took several days to melt, adversely affecting several early-nesting species. See the reports below from the 2 eastern regions for detailed effects of the snowstorm. April temperatures were below average in East Tennessee. During May, precipitation was generally near normal, and temperatures were above normal.

Few spring migrants arrived early this year, and many species were later than normal. Some of this was probably due to cool weather and snow in early April. Some later arriving species, such as cuckoos, were also late, suggesting inclement early April weather was not the only cause.

A Common Black-headed Gull was reported from the state for the first time. An "Audubon's" Warbler was also reported from Middle Tennessee, for the second reported occurrence of this form in the state. I have been expecting an "Audubon's" Warbler in the state for some time, as it has been reported numerous times in the eastern U.S. Tennessee birders should learn the field marks of this form and closely scrutinize Yellow-rumped Warblers. Other unusual species included Mississippi Kites in Middle and East Tennessee, a Willet high in the Smokies at Newfound Gap, a Franklin's Gull at Chattanooga, and a Common Ground-Dove in Hardin Co. Sandhill Cranes were reported in record high numbers, around 7000 including some flocks probably reported more than once. The cranes apparently entered the state in the Chattanooga area and then many lingered in the Chickamauga Lake-Hiwassee River area. They moved to the northwest, as there were several reports between Putnam and Davidson Counties, but no reports from Pickett County, often the best location in the state for observing cranes.

The following reports also include several interesting breeding records. And, in what may be a precursor of eventual nesting, a Peregrine Falcon was seen in the Smokies on 2 days in early May. As a result of hacking efforts, Peregrines occupied territories in western North Carolina last summer. It is now just a matter of time until they are nesting in Tennessee. — CHARLES P. NICHOLSON

Abbreviations used in the following reports include: EOP — end of period; ers — earliest report of season; lrs — latest report of season; max — maximum number reported during season; m.ob. — many observers; WMA — Wildlife Management Area.

WESTERN COASTAL PLAIN REGION — Spring migration for warblers was a little late while some early dates were set for water birds. Swainson's Thrush and Tennessee Warbler were two common transients this season. Spring temperatures were normal but rainfall below normal. The Ensley Sewage Lagoons near Memphis were checked twice a week from mid-March through the end of the season. Only the higher numbers are reported here.

Loon — Merlin: Common Loon: 5 Mar (5) PAP (JCR); 28 Mar (14), 14 May (7), 24 May (1) PLS (JCR). Pied-billed Grebe: 13 Apr (30) TAT (WGC). Horned Grebe: 7 Mar (80) PLS (JCR), peak number; 8 Mar (1) Herb Parson's Lake, FYC (SNM, NPM). Double-crested Cormorant: 22 Mar (5), 12 Apr (17) I13 (JCR); 29 Apr (62) SW SBC (SNM, NPM). ANHINGA: 25 May (2) pair on nest, REL (JCR). American Bittern: 12 Apr (1) near Ridgely, LKC (JCR, DWB); 7 May (1) ESL (JEW, MGW). Snowy Egret: 12 Apr (13) DYC, LKC (JCR, DWB), peak number and ers. Cattle Egret: 4-17 Apr (7) near Newbern, DYC (WGC); 5 May (85+) roosting in willows over water, TAT (WGC); 12 Apr (12) DYC, LKC (DWB, JCR). Green-backed Heron: 21 Mar (1) LNC (MGW), early. Black-crowned Night-Heron: 29 Apr (1) TAT (WGC). Yellow-crowned Night-Heron: 22-23 Mar (4-5) Whitehaven Heronry, SBC (Charles Flowers, BBC). Blue-winged Teal: 12 Apr (215) DYC, LKC (JCR, DWB), max. OLDSQUAW: 4-11 Mar (1) PLS (JCR). Bufflehead: 28 Mar (178) PLS (JCR), max. Osprey: 2 May (1 on nesting platform) REL (WGC); 4 May (2) TAT (WGC); 16 May (1) E of Camden, BNC (CHB). Mississippi Kite: 13 May (15) I13 (WGC). Northern Harrier: 22 Apr (2) FPP (HBD, SCF, NMS). Merlin: 13 Mar (1) Pittsburg Landing Road, HDC (JCR, DJS).

Rail — Gull: King Rail: 27 Apr (1) Hooper Marsh, TAT (WGC). Virginia Rail: 27 Apr (1) Hooper Marsh, TAT (WGC). Sora: 13 Mar (1) HDC (DJS, JCR), ers; 27 Apr (8) Hooper Marsh, TAT (WGC). Purple Gallinule: 23-26 May (1) ESL (JRW, CHB, CGD, DAD, VBR, MGW). Black-bellied Plover: 10, 12 May (4, 1) ESL (CHB, DAD, GRP, VBR, MGW); 10 May (1) I13 (WGC). Lesser Golden-Plover: 26 Mar (240) PEF (HDB, MGW); 12 Apr (217) DYC, LKC (JCR, DWB). Semipalmated Plover: 8 May (30) PHI (WGC). Black-necked Stilt: 2 May (6) ESL (TOS); 26 May (4) ESL (CHB, VBR, MGW). Greater Yellowlegs: 22 Mar (97) DYC, LKC (JCR), max. Lesser Yellowlegs: 22 Mar (43) DYC, LKC (JCR); 22, 28 Apr (44, 82) ESL (CHB, DAD, MGW). Solitary Sandpiper: 22, 28 Apr (55, 33) ESL (CHB, DAD, MGW). Willet: 28 Apr (1) ESL (CHB, MGW); 10 May (2) I13 (WGC). Upland Sandpiper: 27 Mar (7) PEF (VBR). Sanderling: 25 May (4) I13 (JCR); 28 May (1) I13 (WGC). Semipalmated Sandpiper: 17, 24 May (330, 130) ESL (LCC, BBC, CGD, DAD, VBR, MGW). Least Sandpiper: 22 Mar (2) LKC (JCR); 12 May (250) ESL (CHB, DAD, MGW). White-rumped Sandpiper: 10 May (1), 24 May (5), 26 May (3) ESL (CHB, CGD, DAD, GRP, VBR, MGW); 24 May (9) I13 (WGC); 25 May (2) LKC (JCR). Pectoral Sandpiper: 5 Apr (1100), 22 Apr (171), 28 Apr (160), 1 May (319) ESL (CHB, DAD, JCR, JEW, MGW). Dunlin: 8 May (3) PHI (WGC); 12 May (1) ESL (CHB, DAD, MGW). Dowitcher sp.: 22 Apr (1)

ESL (DAD, MGW). American Woodcock: 5 Mar (4) BRF (JCR). Franklin's Gull: 11 Apr (1 ad) PLS (JCR); 2 May (3) Miss. River, SW (JCR, RLK).

Ground-Dove — Waxwing: Common Ground-Dove: 13 Mar (2) 2 mi W of Bethel at jct. of Pittsburg Landing and Bill Welch Rds., HDC (JCR, DJS). SHORT-EARED OWL: 7 Mar (1) BRF (JCR). Chuck-will's-widow: 23 May (15) east of Puryear, HYC (JCR). WILLOW FLYCATCHER: 23 May (10 singing males) BRF (RDH, BHS). Least Flycatcher: 1 May (1) MEM (JCR); 7-8 May (2) MEM (CHB, MGW). Horned Lark: May (nest with 3 eggs, photographed) LKC (WGC). Tree Swallow: 23 May (2+ occupied trees) West Sandy Dike, HYC (RDH, BHS); 23 May (2) Tenn. River, ¼ mi N of bridge at PLS (JWW). Cliff Swallow: 23 May (100+ nests) West Sandy Dike, HYC (RDH, BHS). Fish Crow: 22 Mar (11) Overton Park, MEM (BBC). Red-breasted Nuthatch: 13 Mar (5) HDC (JCR, DJS). Brown Creeper: 13 Mar (10) HDC (JCR, DJS); 30 Apr (1) N of Wolf River and E of Hwy 194, FYC (RPF); 21 May (1) Forked Deer, N of I-40, Madison Co. (RPF); the same locations last year had (2, 1) while none were found at 1986 sites in Shelby Forest and Obion Co. House Wren: 10 Apr (1) MEM (HBD); 1 May (1) PRI (JCR); 6 May (1) Walnut Log, REL, Obion Co. (HBD, CHB, SCF, NMS); 25 May (1) PHI (JCR). Water Pipit: 1 May (3) ESL (JCR); 7 May (1) TN 79 and Great River Rd., LKC (WGC). Cedar Waxwing: 2 Mar (1300) MEM (MGW).

Vireo — Meadowlark: Philadelphia Vireo: 22 Apr (1) FPP (HDB); 3 May (1) HWR (Ann Tarbell, Holly Overton). Tennessee Warbler: 24 May (1) West Sandy WMA, HYC (JCR). Orange-crowned Warbler: 2 Mar (1) PEF (MGW). Cape May Warbler: 8-9 May (1) MEM (GRP *et al.*). Pine Warbler: 13 Mar (63 in 7¼ hrs) HDC (JCR, DJS). Palm Warbler: 8 Mar (1) PEF (VBR, MGW). Swainson's Warbler: 19 Apr (1) Hardeman Co. (BBC, LCC); 11, 23 May (1) Beaverdam Creek, HYC (JCR); 24 May (1) West Sandy WMA, HYC (BHS). Northern Waterthrush: 26 Apr (1) PEF (MTOS). Dickcissel: 23 May (32) east of Puryear, HYC (SJS, JCR); 25 May (168) LKC (JCR). Vesper Sparrow: 22 Mar (12) PEF (MGW). Savannah Sparrow: 23 May (1) BRF (RDH, BHS), lrs. Grasshopper Sparrow: 3, 11 May (6, 10) Elkhorn-Nobles Rd., HYC (JCR); 23 May (7) east of Puryear, HYC (SJS, JCR), (2) BRF (RDH, BHS); 30 May (1) PRI (MTOS). LeConte's Sparrow: 28 Mar (1) BRF (JCR). Lincoln's Sparrow: 28 Apr (1) ESL (CHB, MGW); 1 May (4) MEM (JCR); 3 May (2) HWR (TOS); 5 May (2) ESL (JEW, MGW); 16 May (1) MEM (Van Harris). Bobolink: 29 Apr (80+) SBC (SNM, NPM); 2 May (3) levee W of Wynnburg, LKC, (50) 1 mi N of 79, LKC (WGC); 6 May (500) levee to I13 (WGC). Western Meadowlark: 22 Mar (1) 1 mi W of Cates, LKC (JCR).

Locations: BNC — Benton Co.; BRF — Britton Ford, Tenn. Nat. Wildl. Refuge, Henry Co.; DYC — Dyer Co.; ESL — Ensley Sewage Lagoons, Shelby Co.; FPP — Fort Pillow State Park, Lauderdale Co.; FYC — Fayette Co.; HDC — Hardin Co.; HWR — Hatchie National Wildlife Refuge, Haywood Co.; HYC — Henry Co.; I13 — Island 13, Lake Co.; LKC — Lake Co.; MEM — Memphis; PEF — Shelby Co. Penal Farm; PAP — Pace Point, Tenn. Nat. Wildl. Refuge, Benton Co.; PHI — Phillippi, Lake Co.; PLS — Paris Landing State Park, Henry Co.; PRI — President's Island, Shelby Co.; REL — Reelfoot Lake, Obion/Lake Co.; SBC — Shelby Co.; TAT — Tatumville, Dyer Co.

MARTHA G. WALDRON, 1626 Yorkshire Dr., Memphis, TN 38119.

HIGHLAND RIM AND BASIN REGION — Spring migration was late and generally poor except in May when a "normal" migration took place with about the usual number of unusual sightings reported. Rainfall during the season followed the pattern of the past two dry years. Indeed, the 6.62 inches falling from March-May was the third lowest spring total ever recorded in the Nashville Area and was well below the 14 inches typically falling during those months. Among the monthly totals for Nashville, only the rainfall total in May was near normal (4.41 inches), perhaps accounting for the normal migration which occurred during that month. Temperatures were above the monthly average in March, though a late snowstorm blanketed the northern half of the region 30-31 March and probably affected bird populations adversely. May's average daily temperature of 73.4° F was also warmer than normal, by 5.3° F.

Clearly the bird of the season was Tennessee's first Common Black-headed Gull, found in mid-March at Percy Priest Lake. Recognizable photographs of the gull were taken by a number of observers, many of whom shared their work with the compiler (Figure 1). A Western Meadowlark, somewhat less rare in the region than this European gull, was reported in considerable detail from Lawrence County; however, since the bird never sang, it must go down as another in a long list of might-have-beens. Surely a bonafide regional record of this species will occur soon? More certainly identified in Lawrence County was a Mississippi Kite, a species which ought to be found breeding in some of the regional river bottoms in the near future. In Cheatham County a Swainson's Warbler sang territorially for a few days in early May, adding to a few previous records from that locale. Finally, new to the state was a well-described "Audubon's" Warbler in Stewart County.

Figure 1. Common Black-headed Gull with Ring-billed and Bonaparte's Gulls, Hamilton Creek, Percy Priest Lake, Davidson County, 17 March 1987. Photograph by Paul Crawford.

Observers in the region occasionally ask about the kind of material which is most useful to submit for this report, and a few of them ask particularly why there is a need to publish dates of arrival and departure for migrant species each spring and fall, as I have done once again in this report. Let me say that I am certainly not convinced that such dates are lacking in value, as Joseph Hickey claims them to be in his influential work, A *Guide to Bird Watching* (1943: 26); rather, like Paul DeBenedictus, who has recently commented on them (American Birds 41:50, 1987), I strongly sense that such dates should be published even though I cannot yet quantify the value which they have. Also like DeBenedictus, I would like to see these dates published in a more uniform manner than is currently the case. They are now published for any species for which they are submitted, providing that the dates are fairly near the extremes of the species' occurrence in the region, but surely a better methodology exists than that. For instance, observers might send in data for a particular set of species annually, rather than randomly for all species which migrate. Recently, for instance, the regional coordinators (Steven Cardiff and Donna Dittmann) of the Central Southern Region for American Birds began distributing a list of species for which they request spring arrival dates from observers in a six-state area; presumably, submission of enough such lists would generate useful information about these species. Comments about the need to publish arrival and departure dates from those who contribute to this report — and from those who don't — are welcome.

Thanks are due to all those noted below for submitting data and to John C. Robinson, J. Paul Crawford, and Dot T. Crawford for carefully reviewing a draft of this report.

Loon — Night-Heron: Common Loon: 18 Apr (27) WDR (JCR, SJS, *et al.*), max (24 still present 6 May); 26 Apr (18) Dale Hollow L., PIC (RCH); 28 May (4) PPL — county not specified (MLM), lrs. Pied-billed Grebe: 24 May (1) BEC (JCR), lrs. Horned Grebe: 15 Mar (8) WDR (MDH), max; 13 Apr (1) FRR (SJS), lrs. Double-crested Cormorant: 18 Apr (387) DRU (MHI, CKC), max (only 20 at same site on 25 Apr). American Bittern: 18, 25 Apr (2) DRU (CKC, MHI); 26 Apr-17 May (1-2) BEC (DWB); only reports. Least Bittern: 16-17 May (1-2) BEC (MHI, DWB, JCR, RRD); 29 May (1) CCNWR (JCR); only reports. Great Egret: 17-27 Apr (2) CCNWR (DWB, JCR); 1-3 May (1) ROB (DJS); 4-30 May (1) CCNWR (JCR); only reports. SNOWY EGRET: 5 Apr (1) LIB (DJS), first LWC record; 3 May (1) N of Ethridge, LWC (DJS); only reports (good details). Little Blue Heron: 26 Apr-17 May (2) BEC and CCNWR (DWB, JCR); 15 May (1) Misery Swamp, MTC (AHH), only reports. Cattle Egret: 17 Apr (2) BEC (DWB), ers; 9 May (1) Deerfield, LWC (DJS); 23 May (1) N of Sunrise, Hickman Co. (William Smithson, *fide* BHS); only reports. Green-backed Heron: 26 Mar (1) WSB (DWB), ers. Black-crowned Night-Heron: 29 Mar-10 Apr (up to 5) FRR (SJS); 3 May (1) LWC (DJS); also reported from SUC and SWC. Yellow-crowned Night-Heron: 28 Mar (1 ad) WSB (DWB), ers; 21 Apr (1 ad) Cheatham WMA, CHC (AHH, EJW); 26 Apr (1) CCNWR (JCR); 3 May (1) Little Barton Creek, MTC (John J. Quick); only reports.

Swan — Duck: Tundra Swan: 1 Mar (3) DRU (JCR), completes a Winter 86-87 record. Snow Goose: 20 Apr (2) RDL (Robert P. Ford), lrs. American Black Duck: 11 Apr (2) FCMR (JCR), lrs. Blue-winged Teal: 17 Mar (4)

Barkley WMA, SWC (JCR), ers; until EOP (pair) MOP (BHS *et al.*), lrs. Northern Shoveler: 9 May (1) GSP (DRJ *et al.*), lrs. Gadwall: 6 May (pair) MOP (SJS, DJS), lrs. American Wigeon: 22-30 May (1) CCNWR (JCR), lrs. Redhead: 20 Apr (1) Dunbar Cave S.P., MTC (AHH), lrs. Ring-necked Duck: 5 Jun (1 male capable of flight) MOP (BHS), lrs. Bufflehead: 21 Apr (pair) CCNWR (JCR), lrs. Red-breasted Merganser: 3 May (1) Red Hill, LWC (DJS), lrs. Ruddy Duck: 19 Apr (1) FRR (SJS), lrs.

Raptors: Osprey: 10 Apr (1) DRU (MDH), ers; 12 other reports. MISSISSIPPI KITE: 9 May (1 2nd year) LHL (DJS, Michael A. Beuerlein), first LWC record (good details); rare anywhere in the region. Northern Harrier: 27 Apr (1) CCNWR (JCR), lrs. Sharp-shinned Hawk: 14 reports (4 Mar-10 May). Cooper's Hawk: 12 reports (3 Mar-31 May). *Accipiter* reports were about average for a spring season. Broad-winged Hawk: 28 Mar (4 lifted out of trees between 0935-1015 and thermalled up out of sight in 2 minutes) Lady Finger Bluff on Tennessee R. near Linden, PYC (BHS), ers; 18 Apr (8 with 7 in migrating flock) FKC (JCR, SJS, BHS, SJW), max. Red-tailed Hawk: 4 Mar (1 dark phase) CCNWR (JCR), bird not seen thereafter; 10 Apr (21) SWC (DWB), max; 18 Apr (1 dark phase) GOP (JCR). Rough-legged Hawk: 4 Apr (1 light phase) WMC (BHS), lrs; followed closely the snowfall which covered the region in late March. Golden Eagle: 1 Mar (3) DRU (JCR), lrs; only report. Peregrine Falcon: 9 May (1 imm) WMC (BHS, CAS), lrs; only report. Merlin: 26 Apr (1) CCNWR (DWB), lrs; only report.

Turkey — Crane: Wild Turkey: reported from HPC, PIC, SWC only. Ruffed Grouse: 19-25 Mar (1 drummer) near Cuba Landing, HPC (RLK), considered to have been a disappointing result of the restoration effort mounted during the winter of 1985-86 (Migrant 57:57, 1986). KING RAIL: 18 Apr (2)/6 May (1) GOP (WCF, LBF, JCR, SJS, BHS, SJW, DFV, Lida C. Rodriguez/DJS, SJS), only reports. Virginia Rail: 3 May (1) CCNWR (DWB); 6 May (1) MOP (SJS, DJS); 9-10 May (1) BEC (DWB, JCR); only reports. Sora: 5 Apr (1) LWC (DJS), ers; 3 May (16) SWC (DWB); 10 May (17) SWC (JCR), max; 17 May (1) BEC (JCR), lrs. COMMON MOORHEN: 17 May (1) BEC (JCR, DWB), only report. Sandhill Crane: 2 Mar (40) 8 km S of Hillsboro, CFC (F. Nicky Medley, Lee W. Medley); 2 Mar (270+) BAH (RWS); 2 Mar (50) 10 km ESE Cookeville, PUC (JWW); 3 Mar (250) in and E of Cookeville, PUC (JWW); 3 Mar (50) BAH (RWS); 5 Mar (**590**+, seen mainly between 1322-1352) BAH (RWS); 7 Mar (60) Rutherford Co. (Richard E. Hunter, Wilma J. Hunter); 7 Mar (50+) Nashville (AHN, Robert A. Nixon), this and the previous sighting possibly of the same flock (time and flight direction are helpful data to note in conjunction with crane sightings); 17 Mar (45) BAH (RWS), lrs; cranes apparently migrated somewhat to the west of their usual migration corridor on the Cumberland Plateau; they went unrecorded in PIC by RCH, who usually reports the largest regional numbers, were more conspicuous than usual near Cookeville, and were even reported in the Nashville Basin.

Shorebirds: Lesser Golden-Plover: 15 Mar (3) CCNWR (JCR), ers; 22 Mar-14 Apr (up to 74) LWC (DJS), max (5 Apr); 28 Mar (3) Lady Finger Bluff, PYC (BHS); 5-8 Apr (1-3) Tims Ford L. mudflats, FKC (RWL, MDH); 12 Apr (9) CAB (JPC, DTC), lrs. Semipalmated Plover: 21 Apr (3) CCSP (JCR), ers; 6 May (**160**) GSP (SJS, DJS), new NA maximum number. Lesser Yellowlegs: 1 May (64) ROB (DJS), max. Upland Sandpiper: 13 Apr (1) N of Tullahoma, CFC (MDH), ers; 18 Apr (1) GOP (JCR, WCF, LBF *et al.*); 21 Apr (2) c. 1 km E

of Carlisle, SWC (JCR), max; 5 May (1) PWP (DFV), lrs; only reports, but more than usual for this species in recent years. RUDDY TURNSTONE: 18 Apr (1) Old Hickory Beach, DVC (Ramona A. See), new NA early spring date and only April date (good details). Sanderling: 25 Apr (1) near Spring Hill, on MUC spring count (Brad Hammond, *fide* George R. Mayfield, Jr.), only report (no details). Western Sandpiper: 10 May (1) CCNWR (DWB), only report. Least Sandpiper: 10 May (78) CCNWR (JCR), max. White-rumped Sandpiper: 4 May (1) Todd's Lake, RUC (TJW, DMM), few or no RUC records; 4, 10, 14 May (1/2/3) CCNWR (JCR, DWB); 6, 9, 24 May (1/1/5) GSP (SJS, DJS/DRJ/DTC, JPC), only reports. Baird's Sandpiper: **28 Feb** (11) LOR (DJS), ers; incredibly early, perhaps earliest ever in state (excellent details including sketch). Pectoral Sandpiper: 1 Mar (3) LOR (DJS), ers; 11 Apr (70) CCNWR (JCR), max. Dunlin: 11-12 Apr (1) CAB (Richard Newton, DTC, JPC), new NA early spring date (excellent details and photos). Stilt Sandpiper: 14 Apr (5) CCNWR (DWB), only report. Short-billed Dowitcher: 26 Apr (2) CCNWR (DWB, JCR), ers (good details); 2 other reports lacked substantiating details and remain dowitcher sp.: 3 May (1) CCNWR and 19 May (2) CCSP. Common Snipe: 8 Mar (84) LWC (DJS, JCR), max. American Woodcock: 8 Mar (nest with 3 eggs) near McAllister's Crossroads, MTC (John J. Quick). No reports of any phalarope species were received.

Gull — Tern: LAUGHING GULL: 3 May (1 ad) LHL (DJS), first LWC record (good details). **COMMON BLACK-HEADED GULL**: 13-22 Mar (1 winter ad changing to alternate plumage) Hamilton Creek, PPL, DVC (CGD, m.ob.), first state record (excellent details and good photos); details should be published. Bonaparte's Gull: 4 May (3) CCNWR (JCR), lrs. Ring-billed Gull: 1 Mar (3 ad) ROB (DJS), rare in LWC. Caspian Tern: 26 Apr (4) CCNWR (JCR), ers; 24 May (1) GSP (DTC, JPC), lrs; only reports. Forster's Tern: 20 Apr (1) CCNWR (JCR), ers. LEAST TERN: 27 May (1 ad) CCNWR (JCR), only report (excellent details); the regularity of this species' appearance in Stewart Co. in recent years suggests it may breed somewhere along the Cumberland River or on Kentucky Lake; a survey of the area in June 1988 would seem desirable.

Cuckoo — Woodpecker: Black-billed Cuckoo: 3 May (1) LBL (DWB), ers; 10 May (1) CCNWR (JCR); 15 May (1) LBL (DWB); 23 May (1) CHD (MHI, RRD), lrs; only reports. Yellow-billed Cuckoo: 22 Apr (1) PEB (MLM), ers. COMMON BARN-OWL: 8 Apr (1 found sick or disoriented) near Tullahoma airport, CFC (Chuck Richardson, Ben Layton, L.B. Windley); 14 Apr (1) Mt. Juliet, WLC (John L. Stokes); only reports. Chuck-will's-widow: 20 Apr (2 calling) FCMR (JCR), ers; 17 May (12 calling) HOC (JCR), max. Whip-poor-will: 28 Mar (2 calling) LEF (BHS), ers; 17 May (12 calling) HOC (JCR), max. Chimney Swift: 18 Mar (2) RDL (AHN, Lillian Wurzel, Jane C. Maynard), ers. Ruby-throated Hummingbird: 5 Apr (1 window casualty) CFC (Frank Hernandez, MDH), ers; considered to be late arriving by m.ob. Red-headed Woodpecker: considered by JCR to be "alarmingly" low in numbers in most areas of the region; LWC and WMC populations appear to be in good shape, with the former increasing according to DJS; as has become customary, no data about the CHC population were submitted.

Flycatchers: Olive-sided Flycatcher: 3 May (1) LBL (DWB), ers; 8 May (1) LBL (DWB); 9 May (1) RDL on NA spring count (C. Rowan Debold, Christina Debold, John D. Fort); 17 May (1) CCNWR (JCR); 22 May (1) SW of

Dover, SWC (JCR), lrs; only reports. Eastern Wood-Pewee: 17 Apr (1) PEB (MLM), ers. Acadian Flycatcher: 21 Apr (1 singing) PWP (SDB), ers. Willow Flycatcher: 9 May (3/2) MC/Ashland City, CHC both NA spring count (CGD *et al.*), ers. ALDER FLYCATCHER: 31 May (1 singing) W of LOR (DJS), a seldom reported *Empidonax* in the region (excellent details). Least Flycatcher: only 6 reports (6-16 May), all of 1 bird each. Eastern Phoebe: 15 Mar (29) SWC (JCR), max. Great Crested Flycatcher: 19 Apr (1) WSB (DWB), ers. Eastern Kingbird: 20 Mar (1) PWP (DFV), ers; 29 Mar (1) Long Creek, SWC (JCR), also notably early.

Lark — Creeper: Horned Lark: reported from CFC, LWC, and SWC only. Purple Martin: 6 Mar (1 male) Lawrenceburg, LWC (Wylie Willis, *fide* DJS). Tree Swallow: 20 Feb (1) CCNWR (JCR), ers. Northern Rough-winged Swallow: 22 Mar (2) RDL (MWA, LNA, ARH, BHS, SJS), ers; 18-20 May (2 with a partial nest in a parked semi-tailer on 1st day; trailer moved 2nd day; birds not seen after 3rd day) LOR (DJS); see *Migrant* 57: 108, 1986 for a related nesting record. Cliff Swallow: 28 Mar (4) E side of Kentucky L. in SWC (JCR), ers; 9-10 May (1800+) CHC (MHI, ECC, MJW), max. Barn Swallow: 20 Mar (1) CCNWR (JCR), ers. Blue Jay: 19 Apr (33 migrating) CHD (MHI); 21 Apr (38, many migrating) CCNWR (JCR); only reports of migrant jays. Red-breasted Nuthatch: 27 Apr (1) CCNWR (JCR), lrs. Brown Creeper: 11 Apr (1) LBL (JCR), lrs.

Wrens: BEWICK'S WREN: 3-18 Mar (1) LOR (Donna N. Simbeck, Don K. Simbeck, DJS); 9 Mar (1 singing) Gallatin, SUC (SJS, BHS, DTC); 28-29 Mar (1) CLA (Joe D. Allen, *fide* AHH), CLA received 6 inches of snow shortly thereafter, possibly causing the wren to depart (or freeze); 25 Apr (2) entrance road to CLSP (JCR); several May (i.e., breeding) records; see Summer 87 report. House Wren: 22 Mar (1) LIB (DJS), ers. Winter Wren: 26 Apr (1) EWP (Paul B. Hamel, William and Connie Cowart), lrs. Sedge Wren: 3 May (9) SWC (DWB), max; 9 May (3) BEC (DWB); only reports. Marsh Wren: 14 Mar (1) MC (DFV), ers; 9 May (8) BEC (DWB), max.

Kinglet — Vireo: Golden-crowned Kinglet: 17 Apr (6) LBL (DWB), lrs. Blue-gray Gnatcatcher: 23 Mar (1) PWP (DFV), ers; 26 Apr (36) MBSP (JCR), max. Swainson's Thrush: 23 May (1) CLA (AHH), lrs. Hermit Thrush: 23 Apr (1) PEB (MLM), lrs. Wood Thrush: 15 Apr (1) CCNWR (JCR), ers. Water Pipit: 28 Apr (1) CCNWR (JCR), lrs. Warbling Vireo: 8 Apr (1) CLA (EJW), ers. Philadelphia Vireo: 26 Apr (1) BEC (DWB), ers; only 3 other reports.

Warblers: Blue-winged Warbler: 15 Apr (1) CFC (MDH), ers. Golden-winged Warbler: only 5 reports (26 Apr-4 May). "Brewster's" Warbler: 23 Apr (1) Lovelady, PIC (RCH). Tennessee Warbler: 17 Apr (1) LBL (DWB), ers. Orange-crowned Warbler: 26 Apr (1) BEC (DWB); 7 May (1) RDL (CAS); only reports. Nashville Warbler: 20 Apr (1) LBL (JCR), ers. Northern Parula: 11 Apr (1) LEF (BHS), ers. Yellow Warbler: 17 Apr (1) CCNWR (DWB), ers. Chestnut-sided Warbler: 22 Apr (1/1) CLA/PEB (AHH/MLM), ers; 24 May (1) RDL (CAS), lrs. Magnolia Warbler: 15 Apr (1) PWP (SDB), ers. Yellow-rumped ("**AUDUBON'S**") Warbler: 15 Mar (1 male) LBL (JCR), first state record of this subspecies (excellent details); details should be published. Black-throated Green Warbler: 4 Apr (1) PWP (DFV), ers. Yellow-throated Warbler: 29 Mar (1, seen eating cornbread during the snowfall which followed this date) LEF (SJS, BHS), ers. Pine Warbler: pairs reported

from the following fire towers by DWB: Model in LBL, Dover in SWC, Erin in HOC, Tennessee City and Burns in DIC. Prairie Warbler: 12 Apr (1) MOP (William N. Jernigan), ers. Blackpoll Warbler: 18 Apr (1) DRU (MHI, CKC), ers. Cerulean Warbler: 15 Apr (1) PWP (SDB), ers. Black-and-white Warbler: 26 Mar (1) BAH (RWS), ers. Prothonotary Warbler: 7 Apr (1) PEB (MLM), ers; 18 Apr (17) DRU (MHI, CKC), max. **SWAINSON'S WARBLER**: 9-11 May+ (1 singing territorially) Ashland City Marsh, CHC (CGD *et al.*), at site where records of this species also occured in 1942 and 1961 (Parmer *et al.*, Birds of the Nashville Area, 4th ed., p. 38). Worm-eating Warbler: 8 Apr (1) CLA (EJW), ers. Ovenbird: 17 Apr (1) LBL (JCR), ers. Northern Waterthrush: 19 Apr (1) CHD (MHI), ers; 16 May (1) Terrapin Run Cr., SWC (JCR), lrs. Louisiana Waterthrush: 17 Mar (1) Basin Spring, WMC (Katherine A. Goodpasture), ers. Kentucky Warbler: 14 Apr (1) EWP (DFV), ers. CONNECTICUT WARBLER: 4 reports, none with acceptable details. MOURNING WARBLER: 4 reports, none with acceptable details. Common Yellowthroat: 10 Apr (1) LBL (DWB), ers. Hooded Warbler: 15 Apr (1) CFC (RWL), ers. Wilson's Warbler: 9 May (3) BEC (DWB), max; only report. Canada Warbler: 1 May (1) LBL (DWB), ers; 19 May (1) CFC (MDH), lrs. Yellow-breasted Chat: 20 Apr (1) LBL (JCR), ers.

Tanager — Dickcissel: Summer Tanager: 15 Apr (1) Dover Fire Tower, SWC (DWB), ers. Scarlet Tanager: 16 Apr (1) LBL (JCR), ers; 26 Apr (17) MBSP (JCR), max. Rose-breasted Grosbeak: 24-28 Mar (1 male at bird feeder and birdbath) Buffalo Rd. SW DVC (Debbie W. Hill), probably a bird which overwintered in the U.S.; 22 Apr (1) CCNWR (JCR), next earliest report. Blue Grosbeak: 26 Apr (2) BEC (DWB), ers. Indigo Bunting: 13 Apr (1) CLA (AHH), ers. Dickcissel: 2 May (11) MTC (EJW, AHH), ers and max.

Sparrows: BACHMAN'S SPARROW: 28 Mar (1+) Giles Co. site (DJS), ers; also found at 1 other site in county and at 1 LWC site; see Summer 87 report. Chipping Sparrow: 9 Mar (1) CLA (AHH), ers. Vesper Sparrow: 8 Mar (1) LWC (JCR, DJS), ers; 29 Apr (1) CCNWR (JCR), lrs. Lark Sparrow: 3 May (1) CCNWR (DWB), ers; 10 May (2) Pardue's Pond, DIC (MHI, ECC, MJW); only reports with details. Savannah Sparrow: 17 May (1) CCNWR (JCR), lrs. Grasshopper Sparrow: 25 Apr (1) 2 km S of entrance to CLSP (JCR), ers. Lincoln's Sparrow: 22 Mar (1) LIB (DJS), ers. Swamp Sparow: 16 May (1) CCNWR (DWB), lrs. White-throated Sparrow: until EOP (1) SUC (Bessie Hagan, *fide* JPC), lrs; see Summer 87 report. White-crowned Sparrow: 15 May (1) N WMC (CAS), lrs. Dark-eyed Junco: 4 May (1) LBL (DWB), lrs.

Icterids — Fringillids: Bobolink: 21 Apr (1/8) BAR/CCNWR (DWB/JCR), ers. BREWER'S BLACKBIRD: until 5 Apr (up to 19) LWC (DJS, JCR); 13 Apr (1 female) c. 1 km E of Carlisle, SWC (JCR), lrs. Orchard Oriole: 17 Apr (2) WSB (DWB), ers. Northern Oriole: 22 Apr (1) WSB (DWB), ers. Purple Finch: 9 May (1) LEF (SJS, BHS), lrs. RED CROSSBILL: 31 Mar (3) LBL (DWB), only report. Pine Siskin: until EOP (1) WLC (Earline C. Berry, Vernon Berry), lrs. Evening Grosbeak: 9 May (2) Dover, SWC (JCR), lrs.

Addenda: An unidentified *Empidonax* collected as a road kill on Del Rio Pike, WMC, on 21 May 86 (SJS) was identified by Roger Clapp (U.S. Museum of Natural History) as a "Traill's Flycatcher (pers. comm. from Richard C. Banks, USMNH, to DFV); the specimen now resides at the Warner Parks Nature Center (#168), DVC; only one previous WMC record of Willow or Alder Flycatcher is known, and, interestingly, that record is of a

Willow Flycatcher singing territorially from 17 May-2 June 86 on Del Rio Pike, about 1 km from the site where the road killed bird was collected (Migrant 57: 108, 1986). On 8 Apr 84 a banded Common Grackle was trapped by DFV at 3507 Belmont Blvd. in Nashville; the Bird Banding Laboratory subsequently reported that the band (1113-94834) had originally been placed on the bird (at the time an AHY female) by Amelia R. Laskey on 2 Apr 73 "near Nashville" (i.e., probably Graybar Lane).

Corrigenda: Migrant 57:77, 1986: in Table 1 add an asterisk after "Blackpoll Warbler"; Migrant 57: 79, 1986: in entry for Least Flycatcher under 4 May change "Percy Priest L. area (Audrey D. Perry, Ray Fleischer)" to RDL (*fide* CKC)."

Locations: BAH — Barnes Hollow, Putnam Co.; BEC — Bear Creek Waterfowl Management Unit, Stewart Co.; CAB — Cage's Bend, Sumner Co.; CCNWR — Cross Creeks National Wildlife Refuge, Stewart Co.; CCSP — Cumberland City Steam Plant, Stewart Co.; CFC — Coffey Co.; CHC —Cheatham Co.; CHD — Cheatham Dam, Cheatham Co.; CLA — Clarksville, Montgomery Co.; CLSP — Cedars of Lebanon State Park, Wilson Co. DRU — Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co.; DVC — Davidson Co.; EWP — Edwin Warner Park, Davidson Co.; FCMR — Fort Campbell Military Reservation, Montgomery and Stewart Cos.; FKC — Franklin Co.; FRR — Franklin Reservoir, Williamson Co.; GOP — Goose Pond, Grundy Co.; GSP — Gallatin Steam Plant, Sumner Co.; HOC — Houston Co.; HPC — Humphreys Co.; LEF — Leiper's Fork, Williamson Co.; LHL — Laurel Hill Lake, Lawrence Co.; LIB — Liberty Grove, Lawrence Co.; LOR — Loretto, Lawrence Co.; LWC — Lawrence Co.; MBSP — Montgomery Bell State Park, Dickson Co.; MC — Metro Center, Davidson Co.; MOP — Monsanto Ponds, Maury Co.; MTC — Montgomery Co.; MUC —Maury Co.; NA — Nashville Area (all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, and Wilson Cos., and parts of Dickson and Trousdale Cos.); PEB — Pennington Bend, Davidson Co.; PIC — Pickett Co.; PPL — Percy Priest Lake (in Davidson, Rutherford, and Wilson Cos.); PWP — Percy Warner Park, Davidson Co.; PYC — Perry Co.; RDL —Radnor Lake State Natural Area, Davidson Co.; ROB — Robertson Pond, Lawrence Co.; RUC — Rutherford Co.; SUC — Sumner Co.; SWC — Stewart Co.; WDR — Woods Reservoir (in Coffey and Franklin Cos.); WLC — Wilson Co; WMC — Williamson Co.; WSB — Wiley's Spring Bay, Stewart Co.

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EASTERN RIDGE AND VALLEY REGION — After a mild winter, March temperatures were near to slightly above normal, April was several degrees below normal, and May was considerably warmer than normal. Rainfall was 2-3 inches low at Chattanooga and Knoxville, but near normal at Johnson City.

The weather event of the season was a freak snowstorm on 3-4 April. Chattanooga received 3 inches on the fourth, but it had melted by mid-afternoon. About 10 inches accumulated in Knoxville, mostly on the third,

and did not fully melt off until 6 April. During the 2-day storm, the Johnson City area was blanketed with 14-17 inches, with Tri-Cities Airport reporting 14.8 inches — more than twice the previous April record and the third deepest snowfall since record keeping began in 1943. Very cold temperatures allowed the snow cover to remain until 8 April in that area. Insectivorous birds, in particular, were forced to "tough it out". Purple Martins and Eastern Bluebirds suffered the most. Although dead martins and bluebirds were reported from Knoxville, the worst news came from upper East Tennessee. Purple Martin mortality rates there ranged from about 10-20% per colony; but only a small fraction of the local breeding population had arrived by that time and nesting success later on appeared to be excellent. The bluebird population was devastated, with many reports of dead birds inside or near nest boxes (details concerning both species will be published). From the Knoxville and Johnson City areas, nesting failures were reported for Killdeer, Mourning Dove, Eastern Phoebe, Eastern Bluebird, and American Robin; however, 2 young Mourning Doves survived the blizzard and fledged on 8 April in this writer's yard in Johnson City.

Most late-March migrants arrived on time, but many subsequent migrants were delayed, even some which do not normally arrive until late April or early May, such as Yellow-billed Cuckoo. Other factors must have been involved.

Not all of the news was bad. A few unexpected species and above average movements of several other species were reported, as well as other migration data and some significant breeding records. Read on!

Loon — Heron: Red-throated Loon: 5-10 Apr (1) CHL (KHD, RJH, AMJ, JTP *et al.*). Common Loon: 5 Apr (37) CHL (KHD, LHD) and 17 Apr (37) BOL (RLK), max; 25 Apr (8) BOL (MD, RH), lrs. Pied-billed Grebe: 13 May (2) AUS (RLK), lrs. Horned Grebe: 14 Mar (30) CHL (KHD, LHD), max; 11 Apr (2) AUS (RLK), only JNC area report and lrs in region. Double-crested Cormorant: 21 Mar/5 Apr (1/35) CHL (KHD, LHD); 10-11 Apr (2, 1) FLL (MLD, ARH, RDH *et al.*); 16 Apr (1) BOL (RLK, GDE, BC); 26 Apr (36) "record high count on the KNC Spring Count included 12 flying over downtown KNX and 24 on FLL" (MLD *et al.*). American Bittern: 18 Apr (1) MVM (RAP); 22 Apr (2) AMM (CDB, JCW, SLW). Great Egret: 29 Mar (1) HRA (KHD, LHD); 11-12 Apr (1) FLL (MLD, PSP *et al.*); 16-19 Apr (1) AUS (RLK, GDE, BC); 16-17 Apr (1-3) SAB (LHD); 17-19 Apr (1-9) CHA (Jay W. Knott); 6 May (2) AUS (RLK); 16 May (1) EBF (CPN, MLD *et al.*). Snowy Egret: 22 Apr (1) CHA (JTP, LHD); 8 May (1) AUS (SG, GWS, CFW, BC). Little Blue Heron: 6 May (1 ad) AUS (RLK). Cattle Egret: 25-26 Apr (1) AUS (RLK, BC); 2 May (1) north POC (JCW, Russ Meek). Black-crowned Night-Heron: 31 Mar (2) BYC (DCC); 11 Apr (2) CHA (JSL); 16-17 Apr (1-3) SAB (LHD); 25 Apr (1) AUS (RLK, BC). Yellow-crowned Night-Heron: 5 Apr (6) returned to 1986 CHA nest site (*fide* L.E. Atkins).

Waterfowl: Canada Goose: high water flooded several nests in the JNC area, but others were successful (RLK). Green-winged Teal: 5 Apr (4) HRA (KHD, LHD), lrs. American Black Duck: 14 Mar (45) HRA (KHD, LHD), lrs. Mallard: 25 Apr (female with 16 young) AUS (RLK, BC). Blue-winged Teal: 13 Mar (2) JNB (RLK), ers; 12 Apr (145) HRA (KHD, LHD), max; 6 May (2) AUS (RLK), lrs. Northern Shoveler: 15 Mar — 13 Apr (3-22) HRA, CHL (KHD, LHD, RJH, JSL); 19 Apr (8) Rankin Bottoms, Cocke Co. (JAK), lrs.

Gadwall: 13 Apr (2) AUS (RLK), lrs. American Wigeon: 15 Apr (1) AUS (RLK), lrs. Canvasback: 21 Mar — 5 Apr (2) CHL (KHD, LHD), only report. Redhead: 14 Mar (7) CHL (KHD, LHD), lrs. Ring-necked Duck: 7/15 Mar (200/250) HRA/CHL (KHD, LHD, JDR, RJH), max; 11 Apr (25/14) FLL/AUS (MLD, PSP/RLK), good numbers for date; 5 May (1) JNB (RLK), lrs. Greater Scaup: 1 Mar (225) CHL (KHD, LHD), max. Lesser Scaup: 14 Mar (500) CHL (KHD, LHD), max; 11 Apr (250/90) FLL/AUS (MLD, PSP/RLK), good numbers for date; 25 Apr (5) AUS (RLK, BC), last migrants; one all period and into summer on pond in JNC (RLK, MD). OLDSQUAW: 25 Apr (1 breeding plumage male) AUS (RLK, BC); next to latest spring record in state, latest 4 May 1967 in Nashville (Migrant 38:48, 1967). Surf Scoter: 20 Apr (2) SAB (KHD, LHD, CDB, DCC, JSL, JCW, SLW, Barbara McMahan). White-winged Scoter: 7-20 Mar (1-2) CHL (KHD, LHD, CDB, JTP). Common Goldeneye: 16 Mar (1) CHA (RJH), lrs. Bufflehead: 11 Apr (30/1) FLL/AUS (MLD, PSP/RLK); 12 Apr (2) CHL (KHD, LHD), lrs. Hooded Merganser: 25 May (1) AMM (KHD), lrs. Red-breasted Merganser: 11/17 Apr (11/1) AUS (RLK), max/lrs. Ruddy Duck: 20 Mar (150) CHL (AMJ), max; 17 Apr (3) BOL (RLK), lrs.

Vulture — Rail: Black Vulture: small numbers throughout period (along with several regular Turkey Vultures) at Raccoon Valley landfill, Anderson Co. (CPN). Osprey: numerous reports of 1-2 birds during Apr and early May on regional waterways. MISSISSIPPI KITE: 2 May (1) Reflection Riding, CHA (CDB, D. Kenton Dickerson *et al.*), second spring and fifth overall CHA area record (see Migrant 53:64-65, 1982). Bald Eagle: 15 May (1 ad) Tennessee River Gorge (James K. Pettyjohn). Northern Harrier: 26 Apr (1) POC (JCW), lrs. Sharp-shinned Hawk: 19 May (1 nest) BAM (FJA, RAP), pair present, female incubating. Peregrine Falcon: 7/23 Mar (1 ad) CHL (KHD/AMJ). Ruffed Grouse: 21 Apr (1) JNC (RLK). King Rail: 12/21 Apr (1) AMM (RAR, LHD/JTP); 12 Apr (1) Alcoa Marsh, BLC (MWA, LNA). VIRGINIA RAIL: 13 Mar/20 Apr (4/nest with 7 eggs, later destroyed) MVM (RAP), previous nest found 20 Apr 1976 at MVM (RAP). Sora: 23 Mar — 22 Apr (1-2) AMM (Paul C. Harris, RJH, RAR, SLW *et al.*); 18 Apr (**14**) MVM (RAP); 25 Apr (1/2) AUS/LST (RLK, BC); 26 Apr (4) KNC (KNX Chapter); 1 May (1 road kill) Speedwell, CIC (GWM); 2 May (1) CHA (RJH); 5 May (1) SAB (KHD); 6 May (1) GNC (RN, WRN); good number of reports.

Sandhill Crane: After reporting the largest number of cranes documented wintering in Tennessee (see last report), observers in the Chattanooga area saw the largest, or at least best documented, migration ever. Forty-four reports by 24 observers totaling **5628** cranes (with some duplication) between 21 Feb and 15 Mar were received by KHD (12 reports of 100-199 cranes, 11 of 200+). These reports came from HLC (27 reports), Meigs Co. (11 reports), BYC and Marion Co. (1 report each), as well as Walker Co., Georgia (4 reports). The peak of the flight occurred during 2-5 Mar with 700 or more cranes seen each day, including 800-1000 observed migrating over SIM on 5 Mar by Robert C. Hornsby *et al.* ("the largest sustained movement to date" *fide* KHD). Elsewhere along the crane migration corridor — 3/4 Mar (50/40) SEW and 6 Mar (50) Grundy Co. (Jerry L. Ingles); 3 Mar (8) Putnam Co. (JWW); 3 Mar (17/9) Crossville/I-40 at Genesis Rd., CUC (Clarence D. Coffey/Allen York). No reports from KNX area.

Shorebirds: Lesser Golden-Plover: 5 Apr (2) SAB (KHD, LHD); 8/13 Apr (4/1) AUS (RLK), third spring and fifth overall record in JNC/Elizabethton

area; 10, 11 Apr (7, 9) KNC (MLD, ARH, RDH *et al.*); 12 Apr (1) KSP (KHD, LHD); good showing. Semipalmated Plover: 30 Apr (2) EBF (CPN, RLK); 24-31 May (1) KSP (KHD, LHD). Greater Yellowlegs: 5-12 Apr (2-4) HRA (KHD, LHD); 11 Apr — 6 May (1-8) AUS (RLK). Lesser Yellowlegs: 29 Mar — 13 Apr (1-17) HRA (KHD, LHD); 28 Mar — 6 May (1-21) AUS (RLK). Solitary Sandpiper: 2 Apr (1) CHA (RJH), ers; 25 Apr (29) several scattered ponds, WGC (RLK, BC), max; 6 May (2) AUS (RLK), lrs. Spotted Sandpiper: 23 Apr — 13 May (1-4) AUS (RLK). Upland Sandpiper: 26 Apr (1) KNC (ARH). Ruddy Turnstone: 24 Apr (1) JNB (MD, GWS, BC, CFW); first spring and fourth overall record for upper East Tennessee, others from Roan Creek (Johnson Co.) in Eastern Mountain Region (Migrant 56:103-105, 1985). Semipalmated Sandpiper: 26 Apr — 31 May (1-5) KSP (KHD, LHD); 5 May (2) JNB (RLK). Least Sandpiper: 13-29 Mar (2-3) SAB (KHD, LHD); 26 Apr (1) AUS (RLK); 10 May (15) KSP (KHD, LHD). White-rumped Sandpiper: 13 May (5) KSP (MLA, LNA). Pectoral Sandpiper: 13 Mar — 5 Apr (2-53/20) SAB/HRA (KHD, LHD); 8-25 Apr (1-11) AUS (RLK *et al.*). Dunlin: 5 Apr (53) HRA (KHD, LHD), lrs at this wintering site. Stilt Sandpiper: 8 May (1) AUS (SG, CFW). Common Snipe: 4 Mar — 6 May (1-25) AUS (RLK *et al.*), after just 1 winter record in JNC area. American Woodcock: 5 Mar (1) AMM (KHD, Ross Kinderman); 13 Mar (2) MVM (RAP); 14 Mar (6+) KNC (ARH, RDH *et al.*); 3 Apr (1 ad, 2 downy young) seen in 3 inches snow, Big South Fork, Fentress Co. (RCH, Dave Hassler, Dee & John Eiklor); 25 Apr (2 ad with nest) SEW (Harry C. Yeatman, J. A. Yeatman); 13 May (1) AUS (RLK).

Gull — Sapsucker: LAUGHING GULL: 20 Mar (1) CHL (AMJ). FRANKLIN'S GULL: 5-16 Apr (1-3) CHL (KHD, LHD, RAR, AMJ, JTP, RJH *et al.*), first local spring record. Bonaparte's Gull: 29 Mar — 10 Apr (12-20) CHL (KHD, LHD, JTP); 31 Mar — 25 Apr (2-20) BOL (RLK, GDE, BC); 6 Apr (60) HRA (AMJ); 10-11/14 Apr (15-5/40) FLL (MLD, ARH, RDH *et al.*/JAK); 11/25 Apr (10/5) Norris Lake, Union Co. (JCH). Ring-billed Gull: 10 May (15) KSP (KHD, LHD), lrs. Herring Gull: 29 Mar (1) CHL (KHD, LHD), lrs; none this period nor last on BOL (*fide* RLK). Caspian Tern: 10/31 May (3/1) KSP (KHD, LHD). Common Tern: 13 Apr (1) SAB (LHD). Forster's Tern: 13 Apr (2) SAB (KHD, LHD); 16 Apr (1) BOL (RLK, GDE, BC). Yellow-billed Cuckoo: late in arriving in KNX and JNC areas (*fide* CPN and GDE). Common Barn-Owl: 2 Mar (1 road kill) LaFollette, Campbell Co. (GWM); 2 Mar (1) CHA (RJH); 27 Mar (1) AMM (JDR). Chuck-will's widow: 20 Apr (1) SAB (SLW, JCW, LHD), ers. Chimney Swift: 30 Mar (1) JNC (RLK), 1 day short of tying earliest area record. Red-headed Woodpecker: 3 May (1 at probable next site) I-40 at Crab Orchard eastbound rest area, CUC (CPN, RLK); 3 active nest sites in HLC (Randall L. Doyle, Robert B. Clark III, Evelyn White McKinney). YELLOW-BELLIED SAPSUCKER: 10 May (1) Frozen Head Mountain, Morgan Co., elev. 3000 ft., exhibited territorial behavior but not found on 31 May (CPN).

Flycatcher — Vireo: ALDER FLYCATCHER: 25 May (1) CHA (KHD, Robert L. Pierce), a rarely encountered migrant. Willow Flycatcher: 6 May (1) AUS (RLK), ers at known breeding site; 24 May (1) Sharp's Ridge, KNX (JCH), a migrant not in breeding habitat. Eastern Kingbird: 14 Apr (1) JNB (RLK), ers. Horned Lark: 23/26 Apr (1 singing) JNB (RLK); "present all season, singing on 7 Mar at Koella farm, JEC" (JAK). Purple Martin: 1 Mar (1) HLC (KHD), ers; 3 Mar (1) KNC (*fide* J.B. Owen), first there; see intro. Tree Swallow: 18 Apr (250) MVM (RAP), max. Bank Swallow: returned to

1986 KSP nest site (KHD, LHD). Cliff Swallow: 10 Mar (1) CHA (RJH), ers. Common Raven: 13 May (1) St. John's Pond, WGC (RLK). Red-breasted Nuthatch: present in low numbers in KNX area until 4 May (2) (JCH, RLK); not reported elsewhere. **BROWN CREEPER**: 19 May (nest with 6 young) BAM (FJA, RAP), first regional breeding record. Winter Wren: 26 Apr (3) KNC (ARH), lrs. Sedge Wren: 26 Apr (1) KNC (PDH). Marsh Wren: 25 Apr (1) LST (RLK, BC); 26 Apr (1) KNC (PDH); 6 May (1) AUS (RLK). Ruby-crowned Kinglet: 5 May (1) JNC (RLK), lrs. Swainson's Thrush: very scarce in JNC area, only one report all period (*fide* GDE). Hermit Thrush: 25 Apr (1) JNC (RLK), lrs. Water Pipit: 5 Apr (25) SAB (KHD, LHD); 17 Apr (30) TCA (RLK); 23-26 Apr (65) JNB (RLK, BC); last reports. Loggerhead Shrike: 1 pair and 2 single birds seen in JNC area (RLK, GDE, BC). Solitary Vireo: 15 Mar (1) KNX (JCH), ers. Warbling Vireo: 16 May (1) CIC (GWM), only report.

Warbler — Grosbeak: Orange-crowned Warbler: over-wintering bird at KNX last seen on 22 Mar (Louise F. Fuller); 19 Apr (1) Norris (CPN); 4 May (1) KNX (JCH, RLK). Blackburnian Warbler: 24 May (1) KNX (JCH), lrs. Yellow-throated Warbler: 29 Mar (1) BLC (JAK), ers. Palm Warbler: first reports, both very early — 28 Feb (2) Tellico Dam, Loudon Co. (FB, Sharon Bostick); 7 Mar (3) Louisville, BLC (MLD). Prothonotary Warbler: 12 May (1) AUS (GDE), first sighting (late) at only known breeding site in JNC area. Connecticut Warbler: 13 May (1) KNC (FB), only report. Wilson's Warbler: 2 May (1) KNX (JCH *et al.*); 7 May (1) CHA (JTP). Rose-breasted Grosbeak: 18 Apr (1) CHA (RJH), ers; 20 May (1) KNC (MLD *et al.*), lrs. Dickcissel: 9/13 May (1/4) POC (SLW *et al.*). Chipping Sparrow: 27 May (1 albino) Ocoee, POC (SLW, JCW). Vesper Sparrow: 28 Mar — 15 Apr (1-8) AUS (RLK); 28 Mar — 4 Apr (6) GNC (RN, WRN); 5 Apr (6) JEC (JAK); 10-11 Apr (1) KNC (MLD, ARH, RDH *et al.*); 18 Apr (2) CHA (RJH). Savannah Sparrow: 13 May (1) AUS (RLK), lrs. Grasshopper Sparrow: 17 Apr (1) TCA (RLK), ers; 9 May (6) POC (SLW *et al.*). White-crowned Sparrow: 5 May (1) JNC (RLK), lrs. Bobolink: 27 Apr — 9 May (4 reports of 1-20 birds) HLC, POC (m.ob.); fewer than average number of reports in KNC, max 3 May (50) (MLA, LNA); no reports from JNC area. Rusty Blackbird: 25 Apr (2) Blountville, Sullivan Co. (MD, RH), lrs. Pine Siskin: widespread and fairly numerous throughout region; last report in JNC area 9 May (SG); present until early May in KNC (*fide* CPN); max 4-6 May (150+) SIM, then diminishing numbers to 31 May (JSL). Evening Grosbeak: up to 15 regular at SIM through 30 Apr (JSL); 9 Apr (5) POC (JCW); influx into northern half of region — mid Apr to early May (numerous reports, max 50) KNX area (*fide* CPN); 14-30 Apr (many reports, max 50) JNC area (*fide* GDE); 25 Apr (5) Catoosa WMA, CUC (JCR).

Locations: AMM — Amnicola Marsh, Hamilton Co.; AUS — Austin Springs, Washington Co.; BAM — Bays Mountain, Sullivan Co.; BOL — Boone Lake, Sullivan and Washington Cos.; BLC — Blount Co.; BYC — Bradley Co.; CHA — Chattanooga; CHL — Chickamauga Lake, Hamilton Co.; CIC — Claiborne Co.; CUC — Cumberland Co.; EBF — Eagle Bend Fish Hatchery, Anderson Co.; FLL — Fort Loudoun Lake, Knox Co.; GNC — Greene Co.; HLC — Hamilton Co.; HRA — Hiwassee River Area, primarily Meigs Co., but also Bradley, McMinn and Rhea Cos.; JEC — Jefferson Co.; JNB — Jonesborough, Washington Co.; JNC — Johnson City; KNC — Knox Co.; KNX — Knoxville; KSP — Kingston Steam Plant, Roane Co.; LST — Limestone, Washington Co.; MVM — Meadowview Marsh, Sullivan

Co.; POC — Polk Co.; SAB — Savannah Bay, Hamilton Co.; SEW — Sewanee, Franklin Co.; SIM — Signal Mountain, Hamilton Co.; TCA — Tri-cities Airport, Sullivan Co.; WGC — Washington Co.

RICHARD L. KNIGHT, 804 North Hills Drive, Johnson City, TN 37604

EASTERN MOUNTAIN REGION — The weather was a major topic of discussion for the period. March saw above average temperatures with below average precipitation and almost no snowfall. However, April saw the largest snowfall depths ever recorded for the month in the region. At Elizabethton, snow fell from the evening of 2 April until the afternoon of 5 April. Snowfall depths ranged from 16 to 18 inches at lower elevations to over 2 feet in the high mountains, and covered the ground until 7 April. Purple Martin mortality was estimated at 17%, while the Eastern Bluebird population was decimated by an estimated 40-45%. These estimates were supported by Elizabethton spring count data. The rest of April saw above average precipitation, resulting in over twice the normal precipitation at Elizabethton. May temperatures were above average, and rainfall below average.

Several unusual observations during the period were reported. However, some parts of the region are still poorly reported on and each observer needs to make every effort to turn in their sightings. This will result in a more complete and interesting report.

'Loon — Falcon: Common Loon: 24 Apr (1 flying over) CAC (FJA); 25 Apr (13) WTL (LHTOS), lrs. Green-backed Heron: 15 Apr (1) SMV (HHF), ers. Yellow-crowned Night-Heron: 11 Apr (2) Hunter Swamp, ELI (GDE), ers; 2 active nests at same site on 25 Apr (GDE). Canada Goose: 29 Apr (nest fledged 3 young) WTR (GDE). Blue-winged Teal: present in ELI area 5 Apr — 6 May (GDE). Northern Shoveler: 10 Mar (1) , 9 Apr (1) RZF (CFW *et al.*). Bufflehead: 25 Apr (last seen, early departure) WIL (CFW, GDE). RUDDY DUCK: 24-26 Apr (1) CAC (Jim & Betty Reid Campbell, MLD), first GSMNP record. Black Vulture: 5 Apr (4), 28 Apr (2) WIL (GDE *et al.*); 8 May (1) GSMNP (RLK, RC). Osprey: 26 Apr (1) CAC (FJA); 17 May (2) Tellico Lake, Monroe Co. (ARH, RDH). Sharp-shinned & Cooper's Hawks: both species reported in above average numbers in ELI area (*fide* GDE). NORTHERN GOSHAWK: 26 Mar (1) Bristol (GDE). Red-shouldered Hawk: 2 May (1) RNM (LHTOS). Broad-winged Hawk: 9 Apr (first report) RZF (CFW). PEREGRINE FALCON: 25 Apr (1) WTL (GDE, HHF, CFW, GOW); 8-9 May (1) GSMNP (RLK, RC).

Turkey — Woodpecker: Wild Turkey: 26 Apr (9) CAC (FJA). Sora: 25 Apr (1) Erwin (GWS, SG, RPL). WILLET: 26 Apr (1) Newfound Gap, GSMNP (FJA). Common Snipe: 26 Apr (1) CAC (FJA). Bonaparte's Gull: 15 Apr (8) WTL (GDE). Ring-billed Gull: 16 Mar (8) Ocoee Lake, Polk Co. (CPN, JCW), uncommon in area; 25 Apr (43) WTL (GDE, HHF). Yellow-billed Cuckoo: 20 May (1) ELI (HHF), ers, late. Common Barn-Owl: 15 May (1 nest) ELI (GDE). Great Horned Owl: 22 Apr (nest with 2 y) WIL (RLK). Barred Owl: 2 May (2 calling) RNM (GDE, GWS). Northern Saw-whet Owl: 11 May (1 calling) Clingman's Dome, GSMNP (RLK). Whip-poor-will: no reports in ELI area. Yellow-bellied Sapsucker: 31 Mar (1) ELI (HHF), lrs. **RED-**

COCKADED WOODPECKER: 16-17 Mar (1 clan, 3 active cavities) Polk Co., near S side of Ocoee Lake (JCW, SLW, CPN, Bruce Anderson).

Flycatcher — Pipit: Least Flycatcher: 2 May (1) RNM (LHTOS), ers. OLIVE-SIDED FLYCATCHER: 9 May (1) GSMNP (RLK, RC). Purple Martin: 4 Mar (1) ELI (*fide* GDE), ers; approximately 17% mortality following early April snowstorm. Bank Swallow: 24 Apr (3) WTR (GDE); 9 May (1) GSMNP (RLK, RC). Barn Swallow: 17 Mar (1) Ocoee Lake, Polk Co. (CPN, JCW), ers, early. Common Raven: scattered reports from RNM and GSMNP. Carolina Wren: population did not seem to be affected by April snowstorm (*fide* GDE). Eastern Bluebird: several birds reported dead on nests following April snowstorm, with estimated mortality of 40-45% in ELI area (GDE): over 50% drop in numbers on ELI spring count. Veery: 2 May (1) RNM (LHTOS), ers. Swainson's & Gray-cheeked Thrushes: very few reports in ELI area (*fide* GDE). American Robin: unusually high numbers in ELI area through winter and spring (*fide* GDE). Water Pipit: 5 Apr (2) SMV (GDE, HHF).

Vireo — Grosbeak: Solitary Vireo: 17 Mar (1) Ocoee Lake, Polk Co. (CPN). Warbling Vireo: 8 May (1) ELI (SG), ers. Blue-winged Warbler: 25 Apr (1) Erwin (GWS, SG, RPL). Golden-winged Warbler: 2 May (1) RNM (LHTOS), ers. Magnolia Warbler: 5 May (1) Unicoi (FJA), ers. Yellow-rumped Warbler: 7 May (1) ELI (HHF), last report after high numbers all winter. Black-throated Green Warbler: 10 Apr (1) Ripshin Lake, Carter Co. (GDE, RLK), ers. Yellow-throated Warbler: 15 Apr (1) WIL (GDE), ers. Pine Warbler: 15 Mar (1) WTL (GDE), ers. Blackpoll Warbler: 12 May (1) Unicoi (FJA). Swainson's Warbler: 7 May (1) Unaka Mtn. (FJA). Canada Warbler: 7 May (1) Unaka Mtn. (FJA), ers. Blue Grosbeak: 22 May (1) ELI (John Martin), ers. DICKCISSEL: 7 Mar (1 imm male at feeder) ELI (HHF). Vesper Sparrow: 5 Apr (4) SMV (GDE); 9, 12 Apr (1) ELI (FJA). Fox Sparrow: 9 Mar (1) ELI (HHF), lrs. Rusty Blackbird: 13 Apr (1) RZF (FJA); 24 Apr (1) ELI (GDE). Purple Finch: 28 Apr (last seen) ELI (HFF). House Finch: winter flocks started disbanding in late Mar at ELI, first nest located on 13 Apr; first fledglings noted 24 Apr at ELI (*fide* GDE). Red Crossbill: 25 Apr (9) WTL (CFW, GOW); 8 May (2-3) GSMNP (RLK). Pine Siskin: heavy influx at feeders in ELI area during Mar & Apr, last report 11 May (*fide* GDE). Evening Grosbeak: several flocks of 6-15 birds each at feeders in ELI area, last report 3 May (*fide* GDE).

Locations: ELI — Elizabethton; CAC — Cades Cove, GSMNP, Blount Co.; GSMNP — Great Smoky Mountains National Park; RNM — Roan Mountain; RZF — Razor Farm, Carter Co.; SMV — Siam Valley, Carter Co.; WTL — Watauga Lake; WTR — Watauga river, Carter Co.; WIL — Wilbur Lake, Carter Co.

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BOOK REVIEW

BACHMAN'S WARBLER: A SPECIES IN PERIL, by Paul B. Hamel. 1986. 110 pp., 6 figures. $11.95, softbound. Smithsonian Institution Press, Washington, DC.

This slim volume contains 2 parts — a summary of the natural history of Bachman's Warbler, and an extensive bibliography of the species. The bibliography comprises most of the book, and the life history section was apparently added as an afterthought. The bibliography contains 501 entries covering primary and secondary sources through late 1985. References are listed in both alphabetical order and by subject, using the sequence of subject headings in *Zoological Record.* Numerous unpublished reports are included in the bibliography.

The life history section thoroughly summarizes current knowledge of the species, and Hamel occasionally speculates to fill some of the many gaps in our knowledge. The virtual disappearance of the species appears to be related to factors operating on the breeding grounds, during migration, and on the Cuban wintering grounds. Hamel argues that the species bred in disturbed hardwood swamps (an idea not universally accepted), and the availability of suitable habitat varied in space and time. Within this habitat, it was often associated with cane *(Arundinaria gigantea)*, and, as recently suggested by J.V. Remsen, may have been a "cane specialist." Extensive canebreaks have been virtually eliminated by clearing for agriculture. The species' relatively early fall migration exposed it to hurricanes. Meanwhile, on the wintering grounds, already greatly reduced in area following post-Pleistocene glaciation sea level rises, agricultural clearing and hurricanes apparently destroyed winter habitat. Prior to intervention by European man, Bachman's Warbler populations probably fluctuated due to many of the above factors. Following intervention by European man, these population cycles may have increased in amplitude. Hamel suggests the relative abundance of the species in the Mississippi Valley as described by Widmann and Howell near the turn of the century may have been related to an abundance of breeding habitat following extensive high-grade logging in the Mississippi Valley. As these areas grew back, or were later completely cleared for agriculture, the warbler's local population probably crashed.

Does the Bachman's Warbler still survive? Hamel does not have a definitive answer. Sight records of single birds have been reported from the United States and Cuba through the early 1980's, although not all of these are universally accepted. Surviving birds may be dispersed in such low numbers as to have trouble finding mates, and could be easily overlooked by ornithologists. Hamel suggests we keep looking, and thoroughly document our observations.

This book is necessary reading for anyone seriously pursuing Bachman's Warbler, and is a valuable reference to those studying endangered birds in general. The text appears to have been typeset with an ordinary typewriter, an economy measure which should have resulted in a price lower than the rather steep $12. The book could have benefited from maps showing the temporal distribution of the species, but this is a minor complaint. — CHARLES P. NICHOLSON.

PREPARATION OF COPY FOR PUBLICATION

The purpose of THE MIGRANT is the recording of observations and original information derived from the study of birds, primarily in the state of Tennessee or the area immediately adjacent to its borders. Articles for publication originate almost exclusively from T.O.S. members.

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RECENT BREEDING INFORMATION ON BIRDS IN A PORTION OF THE SOUTHERN APPALACHIAN MOUNTAINS

DOUGLAS B. MCNAIR

This paper documents breeding or "breeding-season" information on 31 bird species which I observed in the southern Appalachian Mountains in 1986 and 1987. These observations include information on nest records, nest sites, macrohabitat, high counts, and modest latitudinal or altitudinal range extensions or reoccupations. Most of my observations are from North Carolina in the southern Blue Ridge Mountains and nearby higher mountain ranges, e.g., Great Balsams, Black Mountains. My other records are from South Carolina. All uncited records in this paper are mine.

I also provide a terse historical review, where pertinent, for each of the 31 species in the southern Appalachian Mountains, herein defined as that region south of Kentucky and Virginia, though this boundary is not a natural one. I occasionally append remarks on extralimital records. Reviews for each species vary in length, depending on the useful material available. This material on breeding information is scattered in the literature which I have pulled together to clarify our knowledge for these 31 species. For example, use of census data, rather than sole reliance on anecdotal accounts, has allowed me to improve our understanding of the distribution and abundance for some species. Misleading information has also been clarified, i.e., some careless, unsupported, or inadequately documented statements on the distribution and abundance of species in the literature which have been perpetuated by subsequent investigators. A particularly poor practice is presentation of "breeding-season" records as evidence of breeding when no such evidence has been documented. This practice is particularly prevalent for observations during the breeding season at high elevations (>1525 m).

Elevations of records are given in meters which have been converted directly from the original observations given in feet. Many elevations have been precisely determined within less that 6 m, by myself or other observers, but other elevations have been generally estimated to within 30.5 m. For the reader's convenience as reference, frequently used elevations are 915 m (3000 feet), 1068 m (3500 feet), 1220 m (4000 feet), 1525 m (5000 feet), and 1830 m (6000 feet).

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Several localities with long names are mentioned repeatedly and I list their names and acronyms here: Black Balsam Knob (hereafter BBK), Blue Ridge Parkway (BRP), Great Smoky Mountains National Park (GSMNP), and Shining Rock Wilderness Area (SRWA).

I do not compare material for these 31 species in the southern Appalachian Mountains herein defined to Appalachian regions further north, e.g., West Virginia (Hall 1983), for comparison of avifaunal breeding information is beyond the purpose of the present paper. Hall (1983) presents information, including census data, on the abundance and distribution of many breeding species in different habitats, e.g., Blackburnian Warbler, and these results may be somewhat different from the region reviewed herein. Also, consult Hall (1984) for results on the only long-term population study conducted in the southern Appalachian Mountains, in a second growth red spruce forest on Gaudineer Knob (1335 m) in West Virginia.

Records in "Briefs for the Files" of *The Chat,* "From the Field" of *The Oriole,* "The Season" of *The Migrant,* and regional reports of *American Birds* are cited in the text by volume and page number, and not listed in the "Literature Cited" section.

SHARP-SHINNED HAWK *(Accipiter striatus).* — An immature of unknown sex flew upslope rapidly, from below Pisgah Inn and then over the BRP, to 'move-on' an immature Broad-winged Hawk *(Buteo platypterus)* on 8 June 1986. The Sharp-shinned Hawk then flew rapidly back downslope to a patch of Table Mountain pines *(Pinus pungens)* within an expanse of northern hardwood forest about 75 m lower in elevation than Pisgah Inn (1495 m). My observation of the Sharp-shinned Hawk is consistent with defense of an active nest.

Another Sharp-shinned Hawk, of unknown age and sex, flew over Craggy Knob (1708 m) on 26 June 1986. One of 4 Northern Rough-winged Swallows *(Stelgidopteryx serripennis)* in the area pursued it from above. I have no breeding evidence for this hawk.

Probable or confirmed breeding records for the Sharp-shinned Hawk in North Carolina are scarce and most of the records in the mountains are from intermediate to high elevations (Cairns 1889, Pearson *et al.* 1959, Stupka 1963, Phillips 1979, Meyer and Mueller 1982, Lee *et al.* 1985; see comments by LeGrand in *Chat* 47:28; see also Yeatman 1974, Parmer *et al.* 1985, *Migrant* 57:113, 1986 and Nicholson 1987 for information on breeding Sharp-shinned Hawks in Tennessee). As discussed by Meyer and Mueller (1982), most "breeding-season" records of Sharp-shinned Hawks from May to mid-July cite no breeding evidence. Perhaps the best areas to search for breeding Sharp-shinned Hawks in the mountains during May and June are in pine woods where the hawks may occupy old crow's nests (see Cairns 1889).

NORTHERN BOBWHITE *(Colinus virginianus).* — Three birds sang from below the parking lot for the SRWA at elevations of 1708 m to 1739 m from 31 May to 13 June 1986. I later flushed 1 adult male on 19 August. The next year, 1 bird sang from below the parking lot for the SRWA on 14 July. On 15 July 1987, 2 birds sang at Graveyard Fields at an elevation of 1555 m. Habitat was upland shrub thicket with large grassy patches. H. LeGrand (pers. comm.) has heard bobwhites at both localities in June.

In the Black Mountains, 1 bird sang at 1769 m alongside the Old Commissary Trail near Camp Alice below the peak of Mt. Mitchell on 16 June 1987. Habitat was similar to that above although with a heavy admixture of young fir and spruce trees.

Bobwhites have been proven to breed above 1525 m only twice (chicks seen), on 24-25 August 1951 at 1769 m in the GSMNP (Stupka 1963), and on 29 June 1970 at 1722 m in the Great Balsam Mountains (Simpson 1971). All other breeding-season records of bobwhites above 1525 m are of singing males or otherwise of birds of unknown status from May through September, and these records have been accumulating. Localities are: Great Balsams (Simpson 1971, this paper), Plott Balsams (Simpson 1976), Pisgah Ridge (Stevenson 1957), Unicoi Mountains (McConnell and McConnell 1983), GSMNP (Stupka 1963), Mt. Mitchell (Brewster 1886, Simpson 1972b, this paper), Roan Mountain (1 singing male on 7 July 1979 at 1708 m, R. Knight and C. Nicholson, pers. comm.), and Grandfather Mountain (LeGrand 1976). Bobwhites have been seen as high as 1922 m at Mt. LeConte lodge, GSMNP, and at the summit of Mt. Mitchell (2039 m). Bobwhites require grassy patches for foraging but otherwise have been seen in a variety of habitats: red spruce *(Picea rubens)* and Fraser fir *(Abies fraseri)* forest, open northern hardwood forest and scrub, shrub balds, and grassy balds.

CHIMNEY SWIFT *(Chaetura pelagica).* — Three swifts prospected for a nest site at the new latrine site beside the parking area leading to the SRWA (1769 m) on 31 May 1986. I checked this site later and found no evidence of breeding.

Rhoads (1895) stated Chimney Swifts nested in chimneys of the Cloudland Hotel near the summit of Roan Mountain, but did not cite actual evidence of breeding. Similarly, Wetmore (1939) stated swifts nested in hollow trees from 19-30 June 1937 on Mt. Guyot, Inadu Knob, and Old Black Mountain in the GSMNP. Swifts prospected for a nest site in a hollow tree on Silers Bald, GSMNP, on 30 May 1925 (Stupka 1963). Otherwise, swifts are not known to breed or possibly breed above 1525 m.

NORTHERN FLICKER *(Colaptes auratus).* — One adult female flushed from a cavity of a dead 5 m yellow birch *(Betula lutea)* snag, alongside a trail at 1586 m, about 2 km from the parking lot for the SRWA, on 31 May 1986. The female soon returned and stayed within the cavity, indicating she was incubating (see Jackson 1976). The nest cavity was located 0.3 m from the top of the snag and faced SW. Habitat was open second-growth northern hardwood forest with adjacent thickets.

A pair fed young in the cavity of an 11 m spruce snag, at 1708 m, below the parking lot for the SRWA, in June 1987. The nest cavity was located 2 m from the top of the snag and faced SW. The pair had been present since late March. A pair of flickers was on territory at this site in 1986. Habitat was open second-growth spruce and northern hardwoods forest adjacent to an extensive burn with numerous grassy areas and thickets.

An adult female flushed from a cavity of a dead 7 m spruce snag, alongside a trail at 1769 m at Shining Rock Gap, SRWA, on 30 June 1987. Subsequent observations indicated the female was incubating eggs within the cavity. The nest cavity was located 1.5 m from the top of the snag and

faced E. Habitat was open second growth spruce and northern hardwood forest with numerous partial clearings and thickets.

Aside from the 2 confirmed 1987 breeding records of flickers, I had an estimated 12-14 drumming males or pairs on territory in the Great Balsams above 1525 m, with the center of abundance in the BBK, SRWA, and Graveyard Fields area. I saw numerous unoccupied old cavities in spruce or yellow birch apparently excavated by flickers, and also saw several new incompletely excavated cavities.

Breeding flickers are not scarce between 1200 and 1525 m (Ganier and Clebsch 1946, pers. obs.; *contra* Hamel *et al.* 1982), but probable, presumed, or confirmed breeding records above 1525 m are scarce. Stupka lists 1 confirmed record, at 1700 m, and 1 probable record, above 1525 m, for the GSMNP. Burleigh (1941) stated scattered pairs nested each year in cut-over areas above 1525 m on Mt. Mitchell. Ganier and Clebsch (1946) found parents feeding young at several nests in the Unicoi Mountains at unspecified elevations from a possible range of 1220-1669 m. Otherwise, all other published records of flickers at high elevations from May through July are of individuals of undetermined breeding status, at the Unicoi Mountains (Ganier and Clebsch 1946), Great Balsams (pers. obs.), Pisgah Ridge (Stevenson 1957), Mt. Mitchell (Stevenson 1957, Simpson 1972b), Roan Mountain (Rhoads 1895, Ganier 1936, Stevenson 1957, Potter and LeGrand 1980), and Beech Mountain (pers. obs.). The highest elevations at which flickers have been seen from May through July were 3 at BBK at 1891 m on 20 June 1983 and 1 at Mt. Mitchell at 1952 m on 14 June 1956 (Stevenson 1957).

OLIVE-SIDED FLYCATCHER *(Contopus borealis).* — One male sang for 45 min at or near the tops of spruce and deciduous trees at the margin of Flat Laurel Gap Bog at Mt. Pisgah Campground (1495 m) on 8 June 1986. The flycatcher once pursued a Blue Jay *(Cyanocitta cristata)* and drove it away from a favorite perch in a spruce tree. I did not see the flycatcher prior to or after 8 June.

The only confirmed breeding record for the Olive-sided Flycatcher in the Southern Appalachians from the GSMNP at 1350 m where an active nest was found on 30 June to 5 July 1974 by Williams (1976). Williams found 2 present at the same locality the following year on 25 July. Subsequently, several published (*Migrant* 50:90, 52:99, 55:95) and unpublished reports exist since 1975 from the Alum Cave Trail area at the site of Williams' observations and also near Newfound Gap (C. Nicholson, pers. comm.). Earlier, Burleigh (1935) had but 2 breeding-season records for the GSMNP, 1 a probable breeding pair in 1933 near Newfound Gap, Tennessee (1525 m), and the other a singing male the previous year on 10 July at the same locality. Stupka (1963) stated this flycatcher was an "uncommon summer resident" in the GSMNP from 1934 to 1961, but his documentation of breeding evidence is difficult to interpret and it is unknown whether this species was present at any more than several breeding localities in suitable habitat at higher elevations in the spruce-fir forest. In fact, it is unclear whether or not this flycatcher was regularly present at the GSMNP during the breeding season, though the evidence, i.e., 49 records in June and 37 records in July, suggests that it was. Ganier and Clebsch (1938) had a high count of 8 in the GSMNP at 1068-1830 m from 13-20 June 1938.

In the late nineteenth century, this flycatcher was presumed to breed at several localities in North Carolina: uncommon at the margins of hemlock *(Tsuga* spp.*)* or white pine *(P. strobus)* ravines along streams and at white pine swamps above 1068 m in the Highlands area (Brewster 1886, Ogburn 1931, Pearson *et al.* 1959, Simpson 1980), rare in hemlock woods of the Blue Ridge Mountains (Jeffries and Jeffries 1889), rare in spruce-fir forest of the Black and Craggy mountains (Cairns 1889), and rare in hemlock ravines at 1220 m on Roan Mountain (Rhoads 1895).

The apparent decline of breeding records since the turn of the century parallels this species' breeding range recession from many other localities in the eastern United States (see Forbush 1927, Williams 1976, Hall 1983). Since the turn of the century, this flycatcher has been a very rare breeding bird in the southern Appalachians, not discounting the possible significance of breeding evidence from the GSMNP, and to suggest that this species is even a rare and local breeder is misleading (*contra* Lee 1985). All breeding-season records (which undoubtedly include some migrants) over at least the last 25 years, with the exception of Williams' records, are usually of single birds, occasionally 2, once 4, either singing or silent, present on 1 or 2 days only, and sometimes in unsuitable habitat (Marsh *et al.* 1974, Phillips 1979, Lee 1985, *Chat* 23:90, 44:24, 46:23, *Migrant* 48:107, 52:99, 55:95, 56:82). No breeding evidence exists for any of these records.

W. Smith (*Chat* 33:28) reported seeing 3 young Olive-sided Flycatchers begging for food at North Wilkesboro on 12 September 1968. The submitted details are insufficient to provide reliable documentation of breeding. The young birds were perhaps Eastern Wood-Pewees *(C. virens)*, which regularly fledge at this late date (pers. obs.).

YELLOW-BELLIED FLYCATCHER *(Empidonax flaviventris).* — One male sang the diagnostic 'kil'lic' song 4 times within 30 sec from within stunted moist fir-spruce and northern hardwood forest on a steep slope with extensive downed timber and moss-covered rocks near the Old Commissary Trail below Mt. Mitchell, at 1793 m on 10 June 1987. I never located the bird again on subsequent days, despite intensive searches. Though my observation of this flycatcher constitutes a breeding-season record, and the bird was in habitat suitable for breeding, I have no breeding evidence.

Lee (1985) stated he observed an adult Yellow-bellied Flycatcher in spruce-fir forest at Grandfather Mountain on 16 July 1985. He based his identification on the yellow underparts, including the throat, and did not describe how he determined the bird was an adult. He did not describe the vocalizations he heard, other than to state it was not the Yellow-bellied Flycatcher's diagnostic song. In my opinion, Lee's published details fail to reliably document the occurrence of this species.

ALDER FLYCATCHER *(E. alnorum).* — Seventeen were singing (and some mates seen) within a 3 km radius of the parking lot for the SRWA on 31 May 1986 and approximately the same number was present on 8-9 June 1987. The center of abundance for the flycatchers was the pull-over area at the top of Forest Service Road 816. Habitat was upland deciduous thicket and open immature spruce-fir forest from 1647 to 1830 m. My previous high count for this locality was 8 singing males plus a pair on 20 June 1983. Breeding was confirmed at this locality at 1804 m in mid-June 1984 and in 1986 (Young 1984 *Am. Birds* 40:1204). Presumptive breeding flycatchers

have been reported at this locality since 1976 (LeGrand 1979) and as early as 16 May (pers. obs.).

Alder Flycatchers have been reported at Roan Mountain since 1977, with a maximum of 7 singing males recorded in 1978 and 1984 from 1678 m to 1830 m (LeGrand 1979, Knight 1982, *Migrant* 55:95, *Chat* 49:25). Breeding was proven in 1978 (Lura *et al.* 1979). The earliest record for Roan Mountain is 15 May (*Migrant* 56:82).

Presumptive breeding flycatchers have also been seen at Beech Creek Bog (1403 m) in Watauga Co. (Haggerty 1980, D. McNair, H. LeGrand, and M. Lynch, pers. obs.), and at Mt. Mitchell State Park (*Chat* 48:23). I again saw Alder Flycatchers at Mt. Mitchell State Park, a pair and 2 singing males on the Old Commissary Trail, below Big Tom and Mt. Craig peaks at 1769 m on 2 June 1986. Information on exact site, elevation, and habitat given in *The Chat* is incorrect. The breeding sites are the same for both 1983 and 1986 and the correct habitat information is deciduous saplings, scrub, and forbs of many species, especially blackberries (*Rubus* spp.). No tag alders *(Alnus serrulata)* are present. Spruce-fir forest exists upslope though not within the flycatchers' territories.

Evidence of breeding by Alder Flycatchers is insufficient at Price Park (1068 m) near Blowing Rock, Watauga Co., in 1972 and 1974, and at the confluence of Howard Creek and the South Fork New River (927 m), Watauga Co., in 1982 (*Chat* 46:121) unless further details are published.

EASTERN PHOEBE *(Sayornis phoebe).* — One pair each nested at areas A and C of the Pisgah Campground next to the BRP at an elevation of 1495 m in May and June of 1987. Both pairs built their nests on top of outside concrete walls or ledges of lavatory facilities. The pair at area A began egg-laying on 4 May; the clutch of 4 was complete on 7 May and the 3+ nestlings were about to fledge on 8 June. The pair at area C had completed egg-laying by 8 June; the clutch of 4 was started later than 17 May. Both males sang vigorously on 4 May though the male at area C was unmated at this time, which may explain the delay in nesting of this pair compared to the other. Neither pair renested though the nest at area A was relined. Neither I, nor M. Simpson, nor maintenance personnel of the BRP had discovered phoebes nesting at the Pisgah Campground before.

I also found a pair of phoebes nesting on a rock ledge of a rock face cut of the BRP near the Cradle of Forestry Overlook, at 1434 m, about 3 km from Pisgah Campground, on 8 June 1987. The nest was 4.3 m above ground and contained 5 eggs. I also found an old phoebe nest on the ground beside the base of a rock face cut of the BRP about 100 m away from the active nest. No other pairs of phoebes were on territory in the vicinity and I have no adequate explanation for the existence of this old nest.

I had a male phoebe, apparently on territory throughout May and June of 1987, at a different site on the BRP at 1373 m. This male apparently failed to obtain a mate.

Normally, phoebes nest as high as elevations of 1281 m in the southern Appalachian Mountains (Stevenson 1941, pers. obs.). Other than my 3 nests discovered in 1987, confirmed breeding at higher elevations is known from only 3 sites, at 1684 m in the Great Craggies (Simpson 1968b), and at 1373 m

and 1491 m in the GSMNP (Stupka 1963). Stupka presents little evidence that phoebes "breed regularly" at Cataloochee Ranch (1491 m).

NORTHERN ROUGH-WINGED SWALLOW. — A pair of swallows repeatedly entered the end of an open pipe drilled into the rock face of the BRP near the Cradle of Forestry Overlook, at 1434 m, on 8 June 1987. The pipe entrance was located but 0.3 m above the ground. An adult swallow shielded its' nest, 1.5 m from the pipe entrance, by a defensive posture when I shined a flashlight into the pipe. The nest site was located but 10 m away from the Eastern Phoebe nest on the rock ledge.

Two more pairs nested nearby during May and June at high elevations in the Great Balsams, both within cavities of rock face cuts, 1 pair on NC 215 1.6 km S of the BRP at 1525 m, and the other pair on the BRP near mile post 425 at 1647 m. I watched adults repeatedly enter cavities 3.5 m above ground at both sites, and 1 adult stayed inside each cavity a long time, indicating the birds were nesting. Vegetation partially obscured the entrance to both cavities.

Just south of Craggy Pinnacle tunnel (1708 m), Great Craggies, I watched an adult swallow feed 1 recently fledged young for 1 hr. The young swallow perched on top of a tall snag on a ridge continuous with the tunnel and frequently begged, uttering plaintive calls and quivering its' wings, while the adult foraged nearby. The adult often ignored the young, but when it fed it did so briefly while hovering or perched beside the young. The young only flew once, with the adult. The young's flight was clumsy; it banked awkwardly, its' flight speed was slow, and it was "afraid" of passing cars, which the adult was not. The young's wings appeared short and the tail was not sharply notched. the rictal flanges were still slightly swollen, also indicating it had not completed its' morphological development. The plumage was also less distinct than the adults, though the gray overcast sky made it difficult to discern differences in plumage color between the two. Earlier in May and June, 4 adults were on territory at this site, also noted by R. Ruiz (pers. comm.). I was unable to locate a nest site, but much of the rocky outcrop is inaccessible to viewers without specialized climbing equipment. I also saw adults at this site in 1983 and 1986.

Elsewhere, in the Plott Balsams, 2 adults prospected for a nest site on a rock face cut of the BRP at 1647 m on 20 May 1987, but did not remain to breed. Swallows probably nest at 1434-1495 m on Whitesides Mountain, Macon Co., N.C. I lack positive evidence because it is difficult to examine the huge rock face of this mountain.

Usually, Northern Rough-winged Swallows breed no higher than elevations of 1281 m in the southern Appalachian Mountains (pers. obs.). My above breeding records provide the first published evidence of confirmed breeding at higher elevations.

RED-BREASTED NUTHATCH *(Sitta canadensis).* — I saw a singing male in white pine woods during June 1986 in Cashiers at 1068 m, a pair in white pine woods during July 1986 at High Hampton Inn (1068 m), Cashiers, 2 km from the aforementioned locality, and 1 individual in white pine and hemlock forest on 7 June 1986 at Camp Toxaway near Cold Mountain, Jackson and Transylvania Counties, at 1190 m. I again saw nuthatches in

white pine woods at the same sites in Cashiers and High Hampton Inn in May and June of 1987, plus additional pairs or individuals at 3 different sites at these same localities, all in white pine woods. Two birds, 1 inspecting a cavity, were seen in white pine and hemlock forest on 26 May 1986 at the Walhalla Fish Hatchery, Oconee Co., South Carolina, at 763 m (C. Wooten *fide* LeGrand). Possible or probable breeding nuthatches had not been reported from the Cashiers Valley or the southern Blue Ridge Mountains east of Highlands where they are fairly common breeding birds down to an elevation of 1068 m (Stevenson 1941, Simpson 1976; H. LeGrand pers. comm.; pers. obs.).

No breeding censuses exist for Red-breasted Nuthatch in white pine habitat for the southern Appalachian Mountains, though both Stevenson (1957) and Simpson (1976) state that breeding occurs in this habitat at Highlands. Censuses do exist for other habitats, however, and I provide a summary (Table 1), listing the estimated number of pairs (usually based on counts of singing males) per 40 ha. The censuses indicate that breeding densities do differ depending on habitat and the preponderance of the evidence shows that nuthatches are most numerous in spruce-fir forest, followed in order by hemlock forest, hemlock and northern hardwood forest, and pine woods, which agrees with anecdotal observations by many observers. The census data, as well as anecdotal data, also indicate that numbers of breeding nuthatches may fluctuate greatly. Nuthatches may be absent some years in spruce-fir forest (*contra* Burleigh 1941, Stupka 1963; Phillips 1979, pers. obs.), though they are not believed to have ever been absent during the breeding-season in the spruce-fir forest of the GSMNP (C. Nicholson, pers. comm.).

Simpson (1976) summarizes specific breeding records for Red-breasted Nuthatches for each habitat in the North Carolina mountains. One possibly overlooked record, at an unspecified habitat, was an adult feeding 1 young at Blowing Rock (ca. 1068 m) on 16 June 1968 (*Chat* 32:81), at a low elevation for this species in North Carolina. One nuthatch at nearby Linville Falls in white pine habitat at 946 m on 23 May 1984 may have been breeding (*Chat* 48:100), and I saw 4 here on 11 August 1986 and 2 on 12 June 1987. An individual in unspecified habitat at 885 m, near Cades Cove, Tennessee, on 12 June 1958, was not known to breed (Stupka 1963).

Only 2 proven breeding records exist for the Red-breasted Nuthatch beyond the southern Appalachian Mountains, both at lower elevations than heretofore recorded, at Knoxville, Tennessee, in 1977 (Owen 1979), and in mature scrub pine woods *(P. virginiana)* at Eden, Rockingham Co., North Carolina (Burroughs 1976). An individual in a yard during the entire summer at Goldsboro, North Carolina, was not known to breed (*Chat* 50:26).

In South Carolina, I had 1 or 2 nuthatches at the edge of a beaver pond in pine woods near the Whitewater Falls area at 763 m from 17-22 July 1986, and 1 in white pine woods at the Walhalla Fish Hatchery (763 m) on 28 July 1986. I saw no evidence of breeding at either locality.

BROWN CREEPER *(Certhia americana).* — Four males sang on territory at or near Cashiers from 961-1068 m during May and June 1986 and 6 males sang here during May and June of 1987. Habitat was white pine and hemlock woods, or hemlock woods, sometimes mixed with northern hardwoods. H. LeGrand (pers. comm.) has 1 or 2 summer records of creepers from

Table 1. Breeding bird census data for selected species in the southern Appalachian Mountains.

SPECIES	PAIRS/ 40 HA[1]	HABITAT, LOCATION	ELEV., M	YEARS	REFERENCE
Red-breasted Nuthatch	7-8	Table mountain/pitch pine heath, GSMNP	1220-1344	1947-48	Kendeigh & Fawver 1981
	13-17	Hemlock-hardwoods, GSMNP	1011-1357	1947-48	"
	5-8	Hemlock-hardwoods, Highlands	1190	1946-47	Holt 1974 (Odum 1950)
				1959-60	"
				1971-72	"
	4-17	Virgin hemlock, Highlands	ca. 1220	1946-47	"
				1959-60	"
	9-31	Spruce-fir, GSMNP	1761-1792	1947-48	Kendeigh & Fawver 1981
	40	Spruce-fir, GSMNP-Mt. Collins	1700-1800	mid-1970s	Rabenold 1978
	6	Fir, GSMNP	2013-2025	1948	Kendeigh & Fawver 1981
	8	Fir, GSMNP-Mt. Guyot	1757-1830	1969	Alsop 1969
	20	Fir, Mt. Mitchell	1983-2013	1959	Adams 1959
	5	Fir, Mt. Mitchell	1983-2013	1985	Hammond & Adams 1986
Black-throated Green Warbler	4-11	Chestnut/red oak hardwoods, GSMNP	817-1452	1947-48	Kendeigh & Fawver 1981
	5-22	Cove hardwoods, GSMNP	641-1251	1947-48	"
	14-48	Hardwoods-coniferous, GA	537-561	1969-78	Mellinger 1969-75, 1977-79
	34-70	Hemlock-hardwoods, GSMNP	874-1357	1947-48	Kendeigh & Fawver 1981
	12	Spruce-fir, GSMNP-Mt. Collins	1700-1800	mid-1970s	Rabenold 1978
	12	Fir, GSMNP-Mt. Guyot	1757-1830	1969	Alsop 1969
	75	Fir, Mt. Mitchell	1983-2013	1959	Adams 1959
	none	Fir, Mt. Mitchell	1983-2013	1985	Hammond & Adams 1986
Blackburnian Warbler	6	Cove hardwoods, GSMNP	732-802	1948	Kendeigh & Fawver 1981
	3-10	Hardwoods-hemlock, Highlands	1190	1946-47	Holt 1974 (Odum 1950)
				1959-60	"
				1971-72	"
	13-60	Hemlock-hardwoods, GSMNP	874-1357	1947-48	Kendeigh & Fawver 1981
	8-49	Virgin hemlock, Highlands	ca. 1220	1946-47	Holt 1974 (Odum 1950)
				1959-60	"
	trace	Spruce-fir, GSMNP-Mt. Collins	1700-1800	mid-1970s	Rabenold 1978
	3.3	Fir, GSMNP-Mt. Guyot	1757-1830	1969	Alsop 1969
	35	Fir, Mt. Mitchell	1983-2013	1959	Adams 1959
	none	Fir, Mt. Mitchell	1983-2013	1985	Hammond & Adams 1986

[1]Standardized from census plot area given in original source; effects of plot shape and area may influence the breeding density.

the Cashiers Valley. The only other breeding evidence for creepers in the southern Blue Ridge Mountains east of Highlands was a pair building a nest on the side of an unoccupied house at High Hampton Inn in Cashiers from 13-15 May 1960 (Chamberlain 1960). Creepers are uncommon to fairly common at Highlands down to an elevation of 1068 m in hemlock swamps and woods, and white pine woods to a lesser extent (Brewster 1886, Stevenson and Stupka 1948, Holt 1974; H. LeGrand, pers. comm.; pers. obs.), though creepers are most numerous at higher elevations in spruce-fir forest where they may breed on the highest peaks (Stupka 1963, Kendeigh and Fawver 1981, pers. obs. and many others).

The only breeding evidence for creepers outside the southern Appalachian Mountains are 1 proven breeding record at Nashville, Tennessee (Criswell 1979, Parmer *et al.* 1985), 1 proven and several probable records from western Tennessee (Criswell 1979, Ford 1987), and several possible records at Nashville and from western Tennessee (*Migrant* 48:74, 51:92, 56:107, 57:82, Parmer *et al.* 1985).

CAROLINA WREN *(Thryothorus ludovicianus).* — Three males sang from the understory of spruce-fir and northern hardwoods forest and from roadside thickets dominated by *Rhododendron* spp. along the BRP in 1986 at Richland Balsam (1830 m) on 1 June, at Devil's Courthouse (1647 m) on 1 June, and near Devil's Courthouse, 1 km away from the previous site, at 1739 m, on 8 June. I saw no evidence of breeding for any of these wrens. Carolina Wrens regularly disperse to elevations above 1525 m from July through November (Burleigh 1941, Stupka 1963, Simpson 1976, pers. obs. and many others), but the only other records from April to June, both also without breeding evidence, are of 1 singing from spruce-fir and northern hardwoods forest along the BRP on 19 May 1982 near Bearpen Gap, Jackson Co., at 1617 m (*Chat* 46:121) and 1 at the parking area of Clingman's Dome (1925 m), GSMNP, on 8 June 1944 (Stupka 1963).

HOUSE WREN *(Troglodytes aedon).* — Three males sang in the BBK area at 1769 m on 31 May 1986. At least 1 male was paired, his mate prospecting for a nest site on 13 June, and the pair was seen together through at least 27 July. Habitat was upland deciduous thicket. In the BBK and Graveyard Fields areas during May and June 1987, 11 males sang at elevations of 1525-1830 m. At least 5 males were paired. On 29 June, I flushed an incubating female from an old flicker cavity, located 0.3 m from the top of a 3.7 m yellow birch snag. The cavity entrance faced N. On 14 July, both parents fed 4, possibly 5 nestlings. The snag was located at 1708 m at the border of a thicket and large grassy meadow.

Records of House Wrens during the breeding season above 1525 m are scarce. McConnell and McConnell (1983) had 1 singing at Bob Bald (1629 m) in the Unicoi Mountains on 19 June 1981, and another nearby at Whigg Meadow (1513 m), just below 1525 m, on 17 June, at the edge of a meadow and mountain laurel *(Kalmia latifolia)* thicket. The preceding year, D. Jacobson and G. Mayfield (*fide* Nicholson) had 1 bird at Whigg Meadow on 25 May 1980. Lee *et al.* (1985) stated they recorded House Wrens in meadow and shrub balds on Grandfather Mountain, but submitted no details on their observations. H. LeGrand, M. Lynch and I had several singing males in rural yards on Beech Mountain, above 1525 m, from late April through mid-June of 1987.

GOLDEN-CROWNED KINGLET *(Regulus satrapa).* — C. Wooten (*fide* LeGrand) found 1 singing bird on 12 June 1986 at the Walhalla Fish Hatchery, Oconee Co., South Carolina, at 763 m. Later, Wooten saw this individual male carry food to a grove of white pines but was unable to obtain any further evidence of breeding. Earlier, on 26 May, Wooten had 2 kinglets at this locality. These observations document the first breeding-season record for South Carolina.

Slightly further north in North Carolina, I had 2 pairs in June 1986 and 5 singing males in June 1987 in white pine woods at Cashiers (1068 m). These reports are the first probable breeding records in the Cashiers Valley, east of Highlands (see reviews in Simpson 1972a, also Stevenson and Stupka 1948 and Stevenson 1957). I also had 1 kinglet at Cashiers on 5 May 1984. At Highlands, kinglets have apparently not nested as regularly as Red-breasted Nuthatches and Brown Creepers (Simpson 1972a, *op. cit.*), but have increased recently and are now uncommon though widely distributed in hemlock and white pine woods down to 1068 m (Holt 1974; H. LeGrand, pers. comm.; pers. obs.). In May and June of 1987, I had 41 singing males or pairs in the Highlands area. At Linville Falls, kinglets may breed at an even lower elevation; 4 were singing at 946 m on 23 May 1984 (*Chat* 48:101). I saw 1 here on 11 August 1986 and 6 were singing in late April and June of 1987. Nearby at Cone's Lake, Blowing Rock, Murray (1946) had a pair feeding 2 young in a spruce grove on 5-7 August 1932 at an elevation of about 1113 m.

Kinglets are abundant breeding birds in spruce-fir forest at high elevations (*op. cit.*), less common in hemlock and deciduous forest (7 pairs/40 ha, 1971-1972, Holt 1974; 10 pairs/40 ha, Fawver 1950, Kendeigh and Fawver 1981), and probably least numerous in white pine woods though no censuses exist for this habitat.

BLUE-GRAY GNATCATCHER *(Polioptila caerulea).* — Gnatcatchers are locally uncommon near Lake Glenville, Jackson County, up to an elevation of 1065 m. One to 2 gnatcatchers were present in moist open second-growth deciduous woods besides Cashiers Pond (1068 m) from 15 May through June 1986 and 1987, as was 1 on 3 July 1985, and 1 on 5 May 1984.

Hamel *et al.* (1982) state that gnatcatchers are fairly common breeders in the mountains up to 1050 m, rarely to 1200 m, but cite no specific records. Other sources I have located state that gnatcatchers breed up to elevations of 950-975 m. Tate and Smith (1974) state they heard a gnatcatcher on the BRP, Jackson Co., at 1403 m, on 21 May 1973, but cite no breeding evidence.

EASTERN BLUEBIRD *(Sialia sialis).* — A pair of bluebirds nested near the parking lot for the SRWA at 1769 m in 1986. Habitat was deciduous thicket alongside a recently burned area, adjacent to spruce-fir forest. The pair nested in a 3 m yellow birch snag. The nest cavity, originally drilled by a flicker, was 0.5 m from the top of the snag, and faced SW. The snag was not firmly anchored, and swayed side-to-side about 0.3 m in a 16 km wind or when gently pushed by hand. Very few other suitable cavities were present in the general area (pers. obs.). On 31 May, the female was incubating and the male was guarding the nest and feeding nearby in the burned area, where the female occasionally joined him. On 13 June, the pair was bringing food to the nestlings. No bluebirds were present on 27 July and the top of

the snag was broken off just below the bottom of the nest cavity. In 1987, a male was on territory at this site but failed to obtain a mate.

However, another pair of bluebirds nested at nearby Graveyard Fields at 1540 m on 8-9 June 1987. Both parents fed 3+ nestlings in a cavity 0.3 m below the top of a 1.7 m yellow birch stub. The cavity was formed by natural decay of the wood; most of the bark at the cavity entrance was intact. The cavity entrance faced E. Habitat was an extensive grassy glade and numerous thickets with some northern hardwoods and a few spruce.

Later in 1987, I also found bluebirds nesting on Mt. Mitchell at 1891 m on 22-23 June. Both parents fed nestlings in a cavity of a 10 m coniferous snag. The cavity entrance was 7 m above ground and faced SE. The snag was located in a small glade near the Mt. Mitchell restaurant and living quarters. The adults foraged on or adjacent to the Old Commissary Trail at Camp Alice in an extensive spruce and yellow birch glade with dense grassy cover, along a powerline right-of-way, and in thin yellow birch woods.

Only 1 other published nest record for bluebirds exists above 1525 m. Ganier (1936) found 1 pair feeding 5 nearly fledged young in the cavity of a buckeye *(Aesculus octandra)* on 25 June 1936 at the top of Little Roan Mountain (1769 m). R. Knight (pers. comm.) saw bluebirds prospecting for nest sites on the balds of Roan Mountain at 1769-1830 m in June 1983. Stupka (1963) saw a family in mature deciduous trees near Gregory Bald (1509 m), GSMNP, on 19 June 1936. Similar to Stupka, I saw a family of 4 bluebirds in an open shrubby area near Sam's Knob, Great Balsams, at 1586 m on 29 July 1987, but am uncertain if the birds nested locally. I did not see them at this site earlier in the year. Other reports of bluebirds at high elevations during the breeding season, without details, do not constitute evidence of breeding (e.g., see Burleigh 1941; pers. obs.). As an example, a bluebird I saw at Craggy Pinnacle (1797 m) on 26 June 1986 was flying NE and calling until lost from view at least a km away. The bird was obviously dispersing or migrating.

HERMIT THRUSH *(Catharus guttatus).* — Five males were singing within Mt. Mitchell State Park during June 1986, 3 near the summit of Mt. Mitchell, 1 at Mt. Hallback, and 1 between Balsam Cone and Mt. Tom, all above 1891 m. In May and June of 1987, I had additional males singing in the Mt. Mitchell area, on Clingman's Peak and from below Steppes Gap; the latter bird was singing at the low elevation of 1647-1708 m. Previous high counts of singing males were 4 on 16 June 1985 (*Chat* 50:26) and 3 or 4 on 26 June 1983 (*Chat* 48:24). Habitat is predominantly Fraser fir forest with some spruce.

Hermit Thrushes have also been recorded on territory during the breeding season, at Roan Mountain in 1979, 1983 and 1986 where breeding is probable (Potter and LeGrand 1980, *Migrant* 54:92, *Chat* 48:24; G. Eller and R. Knight, pers. comm.), at Grandfather Mountain in 1984 and 1987, where breeding is also now probable (Lee *et al.* 1985; H. LeGrand and M. Lynch, pers. comm.; pers. obs.), and at Peck's Corner on the Appalachian Trail within the Great Smoky Mountains National Park where breeding is also possible (G. Ellison in lit.).

BROWN THRASHER *(Toxostoma rufum).* — One sang from near the top of BBK at 1861 m on 13 June 1983. I also had 1 pair at this site from May

through July of 1987. Stupka (1963) and Hamel *et al.* (1982) state that the thrasher occurs sparingly during the breeding season up to 1586 m and 1650 m respectively. Stevenson (1957) had many records of thrashers from 1525 m to 1650 m, as I have had recently. In addition, I had about 7 singing males or pairs above 1650 m at other sites in the Great Balsams during May and June of 1987. Other high elevation records of note are 1 at Roan Mountain at 1830 m on 29 June 1946 (Stevenson and Stupka 1948) and 1 on 7 June 1979 (Potter and LeGrand 1980). At least 1 pair of thrashers have usually been present at Carvers Gap (ca. 1708 m) of Roan Mountain during summer in recent years (G. Eller and R. Knight, pers. comm.). Thrashers were present in summer to 1891 m on Mt. Mitchell (Burleigh 1941). Still no cited proven breeding records of thrashers exist above 1525 m.

CEDAR WAXWING *(Bombycilla cedrorum).* — One male sang for 30 min from a snag within a beaver pond surrounded by second-growth coniferous and deciduous forest in South Carolina near the Whitewater Falls area at 763 m on 17 July 1986. Four adults were present in rural yards next to a pond near Mountain Rest at 519 m from 28-30 July 1986. Three other adults were present 6 km away in a tag alder swamp at Mountain Rest (500 m) on 30 July 1986. These waxwings were territorial, though I have no other breeding evidence. Habitat was similar to recent proven breeding records (McNair and Gauthreaux 1984). Only 2 other breeding-season records exist for South Carolina not cited by Sprunt and Chamberlain (1970) or McNair and Gauthreaux (1984). No breeding evidence was cited for a record of 2 birds seen near York on 22 June 1984 (*Chat* 49:26). Two adults I saw at Clemson in second-growth coniferous and deciduous woods alongside Lake Hartwell on 28-29 June 1985 were not known to breed.

Waxwings nested in North Carolina at Delany Bog, just 2 km beyond the South Carolina state line, in Jackson Co., in a tag alder swamp and adjacent moist coniferous and deciduous woods at 945 m in 1985 and 1986 (pers. obs.) and possibly at Crowders Mountain, Gaston County (*Chat* 49:26).

Many other possible, probable, and proven breeding records have accumulated since 1970 in North Carolina (see review of previous records in Simpson *et al.* 1970), accelerating in the 1980s, especially in the Piedmont, east to the Sandhills and the northern Coastal Plain (e.g., *Chat* 42:18, 46:24, 48:100, 49:25, 50:26, 50:129, Snavely and Witherington 1986). This expansion of the waxwing's breeding range to lower elevations in North Carolina is consistent with breeding evidence from South Carolina, Georgia (e.g., Burleigh 1958, *Oriole* 49:83), Tennessee (Bierly 1980, Parmer *et al.* 1985, *Migrant* 55:92, 57:111 and 114; G. Eller, R. Knight, and C. Nicholson, pers. comm.), and Alabama (Imhof 1976), at the southeastern limits of its range. Nests with eggs or young have been regularly found through late July, occasionally as late as late August (*op. cit.*, Murray 1930). Waxwings may nest into October. I saw 2 adults with 2 fledged young, dependent and with the juvenile rectrices incompletely developed, on 14 October 1986 at Cashiers, North Carolina.

WHITE-EYED VIREO *(Vireo griseus).* — From 7-14 May 1986, an adult sang from a tag alder swamp at Cashiers Pond (1068 m). In July, 1 adult sang from the same alder swamp from 3 July to 21 September 1985, 1 adult sang at the same locality again on 17 July 1986, 1 adult sang from Delany Bog (945 m), Jackson Co., near the South Carolina state line on 28 July 1986,

and 1 sang at Highlands Falls Country Club (1220 m) from streamside scrub on 28 July 1986. I did not see or hear any of these birds on territory before or after the above dates. In 1987 at Cashiers Pond, 1 or 2 adults sang from streamside shrubbery on 3 May, 5 June, and 20-27 July. I did not detect the birds on any other dates. I did have other White-eyed Vireos in the Highlands and Cashiers area above 945 m from mid-summer to early fall but these birds were not singing on territory.

Since Brewster's (1886) first visit to the North Carolina mountains in 1885, White-eyed Vireos have usually been reported to breed up to elevations of 850-950 m (Stevenson 1941 and 1957, Stupka 1963, Simpson 1976, Horn 1984, Eller and Wallace 1984 and many others). Hamel *et al.* (1982) state that these vireos may breed up to 1200 m but cite no specific records. Hamel *et al.* (H. LeGrand, pers. comm.) disregarded breeding data at high elevations (>1220 m) on Grandfather Mountain in Alexander (1973) because of the belief the observations are wrong, based on habitat information (unlikely habitat), dates of first observations (too early), and abundance (too numerous), a decision I concur with. Lee *et al.* (1985) recorded this vireo in meadow and scrub balds at Grandfather Mountain at 1525-1769 m, but cite no details nor even mention that these observations are unusual.

Johnston (1964) stated this vireo was an uncommon breeder at Highlands (ca. 1220 m) and Holt (1974) found 7 pairs/40 ha at ca. 1220 m in mesic shrub from 15-30 June 1959 and 22 May to 16 June 1960. Earlier, Stevenson (1941) found no records prior to 1937 and then that year and in 1941 he saw it occasionally up to 1159 m. Specifically, he stated this vireo was scarce at Highlands, 1 pair probably nesting at Mirror Lake (1129 m) in June of 1937 and 1941 and he saw 1 singing male at Sequoyah Lake (1159 m) on 23 June 1937 (Highlands Biol. Sta. biota files; H.M. Stevenson, pers. comm.). T. Howell had a vireo on 26 May 1945 at Highlands and perhaps a different bird on 8 July. T. Crunkleton had at least 1 pair nesting at Highlands at 1129 m in 1950, 1953, and 1954 (Highlands Biol. Sta. biota files), perhaps also at Mirror Lake. Horn (1984) did not find this species breeding at Highlands in 1975 and 1976 above 950 m in Horse Cove Valley, where Stevenson (1941) had them earlier and where I have also had them in recent years. Horn did have 1 pair nesting in 1975 and 1976 in a clearcut at 1037 m. H. LeGrand (pers. comm.) has had many records of singing vireos in moist thickets in June (average of 3-5 a day) during the mid 1970s to the early 1980s on the Highlands Plateau west of Lake Glenville at elevations from 1068-1220 m. Evidently, this vireo has intermittently nested on or near the Highlands Plateau from the late 1930s to the present, though fluctuations in populations above 950 m should be fully documented. That this vireo should first expand its breeding range to the higher elevations of the southern Blue Ridge Mountains before other southern Appalachian mountains should not be surprising because this species favors breeding in moist thickets in a humid, warm climate.

CHESTNUT-SIDED WARBLER *(Dendroica pensylvanica).* — Based on the accounts of Loomis (1890, 1891), this warbler was presumably an uncommon to locally common breeder above 763 m in the Blue Ridge Mountains of South Carolina in the late nineteenth century. H. LeGrand recorded from 1 to 2 singing males at Sassafras Mountain at around 915 m, apparently on territory, in 1974 and 1977 from late May to 16 June but not thereafter. This locality is probably now unsuitable because its shrubby

thickets have become second-growth woodlands. In addition, LeGrand (pers. comm.) had 1 singing in northern Oconee County on 9 June 1974. I. Pitts (*fide* LeGrand) had a singing male throughout June and into July of 1986 at Caesar's Head State Park around 915 m. Pitts also saw a female several times. In Georgia, Odum and Burleigh (1946; see also Burleigh 1958) found this warbler nesting south to the end of the main Blue Ridge Mountains (Pickens Co.) in blighted chestnut *(Castanea dentata)* and other deciduous scrub. Their claim that breeding in Pickens County was a range extension, rather than range reoccupation, is weak because comparative habitat information was not presented, few surveys were conducted prior to 1945, and the records of Loomis indicate this warbler did breed at the edge of its breeding range in the southern Blue Ridge Mountains prior to 1900. In Georgia, this species breeds at elevations as low as 839 m (see Denton 1975) and in North Carolina apparently as low as 610-641 m (Brewster 1886, Stupka 1963), though usually above 915 m. Stupka (1963) had no evidence that a male singing from 4-6 June 1951 at 445 m at GSMNP headquarters nested. Chestnut-sided Warblers will presumably breed again in South Carolina when large tracts of suitable habitat, e.g., clear-cuts, become available above 763 m (see Horn 1984).

Outside the southern Appalachian Mountains, Simpson (1968a) had 1 male singing in an orchard at 763 m in June 1963 and 1965 in the Brushy Mountains in the Piedmont of North Carolina, for a possible breeding record. This species is a common breeder at the higher elevations of the Cumberland Mountains, is rare on the Cumberland Plateau, but is not known to breed in the Eastern Ridge and Valley Province of Tennessee *contra* Bierly (1980) (Nicholson 1987 and pers. comm.).

BLACK-THROATED GREEN WARBLER *(D. virens).* — Following the procedures used before in the account of the Red-breasted Nuthatch, I provide (Table 1) the available census data from the southern Appalachian Mountains and 1 census from the adjacent upper Piedmont. These census data indicate that Black-throated Green Warblers are most numerous in coniferous habitat, either spruce or hemlock, and are also widespread in mature, moist, hardwood forests, but that their numbers fluctuate greatly between years and within habitats. Brewster (1886), Burleigh (1941), and several other anecdotal sources agreed with Adams (1959) that this species was abundant during the breeding season in spruce-fir forest on Mt. Mitchell or at the higher elevations of some other mountain ranges. Hammond and Adams (1986), repeating the earlier survey, had no warblers near the summit of Mt. Mitchell in 1985. I had none of these warblers on the higher peaks of the Black Mountains in 1983, 1986, and 1987 though I did find them locally distributed at lower elevations around 1596-1800 m in spruce-fir and northern hardwoods forests here and in the Great Balsams, which agrees with observations made by Cairns (1889). Fawver (1950) and Noon and Able (1978) have similar observations for the GSMNP though Alsop (1969) and Rabenold (1978) had moderate numbers of warblers present in the GSMNP at the higher elevations, as has C. Nicholson (pers. comm.) in recent years. Phillips (1979) saw no Black-throated Green Warblers in spruce-fir habitat at Roan Mountain in 1977. This species also fluctuates in abundance and distribution in hemlock or hemlock and hardwood forest. Mellinger (*op. cit.*) had birds on his census plot every year in a mountain ravine at 537-561 m (see also Odum 1950, Stupka 1963, Simpson 1972, and Denton 1975). H.

LeGrand and I have found this species to be fairly common and locally distributed in the southern Blue Ridge Mountains up to elevations of 945 m. Yet nearby at Highlands, Brewster (1886), Odum (1950), Johnston (1964), Holt (1974), H. LeGrand (pers. comm.) and I have failed to find this species breeding. Stevenson (1941) states this warbler is absent in the Highlands area from 961-1190 m prior to 15 June; birds seen afterwards were apparently post-breeding birds from lower elevations. Ogburn (1931) suggests that this species may breed on the Highlands Plateau but does not document any evidence. It is puzzling that this species is not known to breed here, for the area has prime habitat of moist mature hemlock forest.

Black-throated Green Warblers have been scarce to, at best, fairly common in spruce-fir habitat at the higher elevations for approximately the last 10 years, though unexplained fluctuations in relative abundance and distribution have occurred for the past 100 years, in this habitat and others. It is not at all apparent in which habitat, spruce-fir or hemlock, that Black-throated Green Warblers may be most numerous in a given year. Local changes in habitat, e.g., maturation of the forest, clear-cutting, disease, air pollution, may be responsible for changes in relative abundance and distribution on several of the censuses and some of the anecdotal accounts, but the preponderance of the evidence indicates that changes in distribution and relative abundance have occurred while prime habitat has remained unchanged. The distribution and abundance within and between habitats over time in the southern Appalachian Mountains needs further elucidation.

BLACKBURNIAN WARBLER *(D. fusca).* — Following earlier procedures, I provide (Table 1) the available census data from the southern Appalachian Mountains. These census data indicate that the Blackburnian Warbler is usually most numerous in coniferous habitat, either spruce or hemlock, but that their numbers fluctuate greatly within the same habitats and in different years. Stupka (1963) stated this warbler was most numerous in the GSMNP in spruce-fir forest and that it nested on the highest peaks, which agrees with data from Alsop (1969) and C. Nicholson (pers. comm.) in recent years at GSMNP, Adams (1959) at Mt. Mitchell, and anecdotal data from some other mountain ranges. However, Brewster (1886), Burleigh (1941), Fawver (1950), Noon and Able (1978), and Rabenold (1978) found Blackburnian Warblers nesting at GSMNP and Mt. Mitchell only in spruce-fir forest where it began to mix with hardwoods at lower elevations, around 1525 m, where these sources considered the warblers to be locally common to uncommon. Stevenson (1957) found but 1 singing male at Mt. Mitchell, at 1922 m, on 14 June 1956, though he found these warblers much more numerous in previous years in spruce-fir forest of the southern Appalachian Mountains. Cairns (1889) never saw Blackburnian Warblers above 1068 m on the Black Mountains nor did Hammonds and Adams (1986) find any warblers near the summit of Mt. Mitchell in 1985. I found Blackburnian Warblers absent from Mt. Mitchell and the Great Balsams in 1983, 1986, and 1987 in spruce-fir forest except at the lowest elevations where I saw only about 6 pairs. Phillips (1979) saw none in spruce-fir habitat on Roan Mountain in 1977 nor did Lee *et al.* (1985) on Grandfather Mountain.

Brewster (1886, see Simpson 1980) did, however, find Blackburnian Warblers numerous in the southern Blue Ridge and Cowee mountains in

Jackson and Macon counties in mature hemlock, and hemlock, oak (*Quercus* spp.), and chestnut forest, and less numerous in hardwood forest, usually above 915 m, and occasionally as low as 824 m. This generally agrees with observations by Stevenson (1941), Holt (1974) and later observations of H. LeGrand and me from this region, though the species may also be numerous in white pine forests (H. LeGrand, pers. comm.). Ogburn (1931) stated that this warbler was scarce at Highlands in 1928 and 1929. The Blackburnian Warbler has been uncommon in the Cashiers Valley and at Highlands in recent years (pers. obs.). Lee *et al.* (1985) found this warbler to be fairly common on Grandfather Mountain in mixed mesophytic forests to elevations as low as 671 m. I only found this warbler to be uncommon here in mid-June of 1987.

In summary, Blackburnian Warblers have been periodically absent or scarce in spruce-fir forest for undetermined lengths of time during a 100 year period since the first explorations of Brewster. When present in this habitat, some observers (e.g. Stupka 1963) have stated this species is more abundant in spruce-fir forest than in hemlock or hemlock and deciduous forest at lower elevations. However, the observations of Brewster (1886), Fawver (1950), Lee *et al.* (1985), H. LeGrand and me, and other cited sources do not agree with Stupka's generalization, and in many years these warblers may be most numerous in hemlock forest as the census data clearly support. Unlike in spruce-fir forest, Blackburnian Warblers have always been reported at the middle elevations in hemlock forest, in varying abundance, though they may have been scarce at Highlands in 1928-1929.

Other general qualitative comments on the distribution and relative abundance of the Black-throated Green Warbler are also largely applicable to the Blackburnian Warbler.

In South Carolina, Loomis (1890) collected 2 males and 1 female Blackburnian Warblers in hardwoods in the southern Blue Ridge Mountains of Pickens County at 763-915 m during mid-June 1889. A male was collected at Walhalla, Oconee County, on 24 June 1940 (Sprunt and Chamberlain 1970). LeGrand and others had 1 singing male on 5 June 1975 near Rocky Bottom, Pickens County, which was at an exceptionally low elevation of 602 m, and again near the same location on 21 May 1977. Habitat was hardwoods with some hemlocks for LeGrand's records. However, no breeding evidence exists for any of these reports. In the southern Blue Ridge Mountains of Georgia, these warblers breed south to Pickens County in coniferous and hardwood forest or in hardwood forest down to elevations of 823 m (Burleigh 1958). In North Carolina, Stupka (1963) reported an individual in the GSMNP as low as 732 m on 11 June 1948 but cited no breeding evidence. In Tennessee, this warbler is not known to breed at the higher elevations of the Eastern Ridge and Valley Province *contra* Bierly (1980) (G. Eller, R. Knight and C. Nicholson, pers. comm.). Breeding of the Blackburnian Warbler has been confirmed at Frozen Head Mountain in the Cumberland Mountains (Nicholson 1987), and Nicholson (1980; pers. comm.) had a male apparently on territory in mid-May, only to disappear the first of June, in an area of mature oaks at another site in the Cumberland Mountains.

YELLOW-THROATED WARBLER *(D. dominica).* — Nine singing males were on territory at Sapphire and Cashiers from 946-1098 m from 30 April through at least early July 1986 in mature open white pine woods; 5 were

singing on territory in 1987. Single singing birds were previously found in Cashiers during May of 1983 and 1984. Single singing birds in the Highlands area at the Highlands Country Club, Highlands Falls Country Club, and below Satula Head at elevations of 1159-1220 m in mature open white pine woods from 8-10 May 1987, were not seen or heard before or after these dates during May. Possible breeding records at 976 m are of 1 at Fontana in June 1948 (Stevenson and Stupka 1948) and 1 singing at 915 m at Roaring Gap, Allegheny County, N.C., on 19 May 1984 (*Chat* 48:101). All other possible, probable or proven breeding records from the southern Appalachian Mountains are from less than 915 m in elevation, usually less than 715-763 m (Stevenson and Stupka 1948, Stupka 1963, Simpson 1976, Hamel *et al.* 1982, Eller and Wallace 1984 and others). Johnston (1964) listed only post-breeding individuals above 915 m in the Highlands area; 1 singing at Mirror Lake, near Highlands, at 1144 m was the earliest, on 19 June (Stevenson 1941). Stupka's (1963) highest record was of 1 bird at 1068 m on 8 July 1936, almost certainly a post-breeding visitor also.

Yellow-throated Warblers have increased in numbers and expanded their range northward in West Virginia recently (Smith 1978). The warblers frequently favor settling on breeding territories in mature open white pine woods.

PINE WARBLER *(D. pinus).* — Two very recently fledged young, with incompletely developed rectrices and remiges, were fed by 2 adults in a mature open white pine woodland at the Linville Falls Picnic Area, Avery County, just off the BRP, at 988 m on 11 August 1986. Approximately 10 other Pine Warblers were present in the pine grove, either adults or completely fledged young; several of the adult males were singing. No other breeding records from the southern Appalachian Mountains above 915 m exist. Johnston (1964) did state that Pine Warblers were rare breeders at Highlands, presumably based on Stevenson's (1941) observations. Stevenson (1941) found males, females, and immatures in white pines on the streets of Highlands at 1160 m from 24 June through August 1937, though otherwise he found this species breeding in the southern Appalachian Mountains no higher than 763 m, which agrees with the reports of other observers. Pine Warblers are uncommon post-breeding visitors to the Highlands and Cashiers area from late June to early October (pers. obs.), and males may sing into October. Therefore, while Stevenson's records suggest rare local breeding at Highlands in 1937, the evidence is insufficient for positive documentation. The status of 2 singing Pine Warblers at 915 m along a pine ridge at Caesar's Head on 29 June 1891 is conjectural (Loomis 1891).

PROTHONOTARY WARBLER *(Protonotaria citrea).* — I saw a singing male at Camp Toxaway along a mountain stream and man-made pools in fairly open coniferous and northern hardwood forest in a gap near Cold Mountain, Jackson and Transylvania Counties, at 1174 m on 18 June 1986. Aside from Cairns' 1 undetailed record in spring of 1895 (Simpson 1980), all other Prothonotary Warbler records in the mountains have occurred since 1974 in the valleys only, usually of singing males that have overshot their breeding range, from 21 April to 1 May (*Chat* 38:80, 40:20-21 and 90-91, and 43:100). One male singing on 14 June 1981 at West Buffalo Creek where it enters Lake Santeetlah in Graham County, North Carolina, may have been on territory (*Chat* 46:24).

LOUISIANA WATERTHRUSH *(Seiurus motacilla).* — Many waterthrushes were on territory below 1068 m in Cashiers. Waterthrushes on territory occurred up to elevations of 1174 m in a hemlock ravine near Little Panthertail Mountain, Transylvania County. My observations agree with the literature (Brewster 1886, Stevenson and Stupka 1948, Stupka 1963, Johnston 1964, Hamel *et al.* 1982 and others). This species is scarce above 1220 m. The highest cited records are 3 at 1281 m and 2 at 1296 m during June in the Unicoi Mountains (Ganier and Clebsch 1946, McConnell and McConnell 1983), 1 singing at 1342 m on 13 June 1987 in a hemlock ravine at Little Grassy Creek, Grandfather Mountain (pers. obs.), 1 at 1373 m in a *Rhododendron* swamp near Highlands (Brewster 1886), and most unusual was 1 shot at 1525 m on 22 June 1939 at Rocky Ridge, Macon Co., near Franklin (Wetmore 1941). Cairns' (1889) statement that these waterthrushes are found "nearly to the tops of the Black Mountains" is difficult to interpret.

YELLOW-BREASTED CHAT *(Icteria virens).* — Chats are usually reported during the breeding season up to elevations of 915 m, frequently as high as 1100 m (Brewster 1886, Stevenson 1941, Burleigh 1958, Stupka 1963, Denton 1975, Simpson 1976, Horn 1984, pers. obs. and many others). On the Highlands Plateau, Stevenson (1941) had the chat casually at 1220 m and 1342 m, but cited no breeding evidence. Johnston (1964) stated the chat was an uncommon summer resident here. At about 1220 m, Holt (1974) had 28 pairs/40 ha in 1959-1960 in mesic shrub and 3 pairs/40 ha in 1971-1972 in young, shrubby, second-growth forest. Neither I nor Horn (1984) has found chats breeding in Highlands or the Cashiers Valley above 1100 m in recent years.

At the GSMNP, Stupka's (1963) only breeding records above 1100 m are individuals up to 1525 m on the Appalachian Trail near Cosby Knob on 29 June 1936, singing on Mt. LeConte at 1627 m on 9 June 1948, and on Hemphill Bald at 1700 m on 11 June 1935. At Mt. Mitchell, Burleigh (1941) had 1 singing male in a cutover area at 1525 m on 8 May 1930. None of these records mentioned any evidence of breeding. On Roan Mountain, numbers of breeding chats have fluctuated greatly since 1970 but chats usually are regular up to 1220 m in years when they are fairly common, and are vagrants on balds up to 1678 m (Eller and Wallace 1984; G. Eller and R. Knight, pers. comm.). Earlier, Stevenson (1957) found chats apparently established on territory on balds at Roan Mountain from 1464-1617 m but gave no evidence of breeding. H. LeGrand (pers. comm.) has heard a few chats singing near the parking lot for the SRWA (1769 m) and near Graveyard Fields (1525 m) in summer but found no evidence of breeding. I heard a chat sing from a grassy burn and blackberry thicket at Graveyard Fields at 1586 m on 9 June 1987. The sources for the statement of Pearson *et al.* (1959) that the chat is a "common summer visitor....including some mountainsides up to 5000 feet" are unknown. Any breeding evidence for chats above 1100 m should be documented to clarify their distribution and abundance.

INDIGO BUNTING *(Passerina cyanea)* — A female was feeding nestlings on 19 August 1986 at 1769 m just beside the parking lot for the SRWA. The nest was located in a blackberry thicket. Not far away, another female fed nestlings at 1708 m on 19 August. This nest was in a blackberry and forb thicket, at the edge of a large grassy field and adjacent thicket, composed principally of blueberries (*Vaccinium* spp.) and tag alder. In addition, other

pairs of adults undoubtedly nested here; I saw family groups with their fledged young (12 females and young plus 3 adult males). Later, on 10 September, 1 fledgling was heavily streaked on the upper breast and had slightly swollen rictal flanges, indicating it still had not completed its morphological development. A third breeding female, on 9 August, fed nestlings alongside the BRP near Richland Balsam in Jackson County at 1833 m. This nest was in a blackberry thicket located among numerous *Rhododendron* and deciduous scrub at the edge of open spruce-fir forest. The young had fledged by 19 August when they were seen at the site with their parents. For all 3 cases of confirmed breeding, the adult male warned the female of intruders. Males had been singing at these sites since June, though they were not singing on the days breeding was confirmed.

Only 1 Indigo Bunting nest has previously been reported above 1525 m. Simpson (1977) found an almost completed nest, on 30-31 May 1975, in the heart of a blackberry thicket at 1585 m along the BRP near Mt. Pisgah, Henderson County.

In the Great Balsams, I had several pairs of Indigo Buntings on territory above 1525 m along the BRP from Richland Gap to Elk Pasture Gap on 20 June 1983, and likewise during June of 1986. I saw a pair in the Black Mountains at Balsam Gap at 1517 m in mid-to-late June of 1983 and 1986. I also had a pair on Mt. Mitchell at 1861 m on 26 June 1986. In the Unicoi Mountains, McConnell and McConnell (1983) saw pairs on grassy balds of the highest summits, at Huckleberry Knob (1696 m) and Haw Knob (1669 m) in mid-June 1981 and 1982. C. Nicholson (pers. comm.) has had at least several pairs in recent years in spruce-fir habitat at high elevations of the GSMNP. These records are the only other evidence of breeding above 1525 m in the southern Appalachian Mountains except for singing males on territory.

Hamel *et al.* (1982) state that records of Indigo Bunting above 1525 m during the breeding season are infrequent. This statement is not supported by Simpson's (1977) records or those of others (Cairns 1889, Rhoads 1895, Ganier 1936, Burleigh 1941, Fawver 1950, Stevenson 1957, Stupka 1963, Eller and Wallace 1984). Indigo Buntings may be numerous up to elevations of 1449 m, locally common up to 1830 m, and locally uncommon above 1830 m on the Great Balsams (pers. obs.), GSMNP (Stupka 1963; C. Nicholson, pers. comm.), Black Mountains (Cairns 1889, Stevenson 1957, pers. obs.), and Roan Mountain (Rhoads 1895, Ganier 1936, Eller and Wallace 1984; G. Eller and R. Knight, pers. comm.). Singing males have been seen at elevations as high as 1922-1952 m on Mt. Mitchell in June of 1983 and 1986 (pers. obs.); 2 singing males were present at 1983 m on Clingman's Peak in the Black Mountains during June of 1987 (pers. obs.).

Representative counts of singing male Indigo Buntings above 1525 m in recent years are: 20 along the BRP from Richland Gap to Elk Pasture Gap on 20 June 1983 in the Great Balsams, 10 along the BRP from Richland Balsam to the Pisgah Inn on 31 May 1986, 7 at BBK on 31 May 1986, 13 along the BRP from Richland Balsam to BBK on 27 July 1986, and 30 from Mt. Mitchell to Craggy Gardens on 26 June 1983. At Mt. Mitchell alone in 1986, I had 3 on 2 June, 2 on 8 June, 12 on 13 June, and 7 on 26 June. In 1987, buntings were even more numerous. I heard about 45 singing in the Great Balsams on 8-9 June and 40 singing from Mt. Mitchell to Craggy Gardens

on 10-11 June. Indigo Buntings have therefore been fairly numerous above 1525 m by mid-June in recent years (see also McConnell and McConnell 1983). Unfortunately, the limited data do not allow determination of the temporal sequence and duration of territorial establishment.

Territorial establishment of Indigo Buntings above 1525 m during the breeding season is not a recent phenomenon but regularity of occurrence above this elevation is poorly known (*op. cit.*, see Simpson 1977). Certainly, creation of favorable habitat, e.g., roadside edge of the BRP, provide sites for occupation but this species may be present at natural sites as well, e.g., balds. Adequate annual censuses to determine this species' distribution and abundance do not exist but some evidence suggests temporal changes in distribution during a single breeding season over time. In contrast to my recent records, Burleigh (1941) only found singing males of this species above 1525 m on the Black Mountains from 5-31 July and explicitly stated the species did not breed here as Cairns (1889) also stated, but it almost certainly does breed at present. At Roan Mountain above 1525 m, Rhoads (1895) stated buntings nested at the summit though he did not cite any evidence. Ganier (1936) saw buntings on Roan Mountain at 8 locations while Stevenson and Stupka (1948) saw none in 1946. Confirmation of breeding in recent years at the higher elevations of the southern Appalachian Mountains is most likely an artifact of the effort required to search for nests, though undoubtedly absence or scarcity of pairs above 1525 m during the breeding season in certain years has contributed to the scarcity of more positive breeding evidence. A major increase in breeding populations of Indigo Buntings above 1525 m has probably occurred since the late 1970s. Annual censuses are needed to document changes in populations at the higher elevations for the Indigo Bunting. Censuses should begin around 18 May as this species rarely arrives before then at the higher elevations no matter how numerous it may be in a given year.

DARK-EYED JUNCO *(Junco hyemalis).* — C. Wooten (*fide* LeGrand) found a pair of juncos in hemlock forest on 26 May 1986 at the Walhalla Fish Hatchery, Oconee Co., at 763 m. At the identical site, Wooten later confirmed breeding when he found the pair feeding 3 juveniles on 12 June. This record is the third breeding locality for South Carolina. I later found 1 junco at this site on 28 July and saw another in hemlock, white pine, and hardwoods forest on 16 July at 854 m near the junction of US 107 and SC 130.

Previous breeding and breeding-season records for South Carolina are reviewed by McNair (1985) and in *Chat* 50:27. In addition to this information, I. Pitts (*fide* LeGrand) found several nests of juncos at Caesar's Head in 1985 and 1 nest in 1986.

Across the state line in the southern Blue Ridge Mountains of North Carolina, pairs of juncos are locally uncommon at elevations of 915-976 m, which generally agrees with the observations of Stupka (1963) in the GSMNP where he saw them as low as 793 m. I also had 2 juncos singing on territory (at 793 m) from 7-20 May 1987 at the Chimney's Picnic Area, GSMNP. Juncos have been seen lower during the breeding season down to elevations of 610 m (Jeffries and Jeffries 1889, Pratt 1970), but no breeding evidence has been cited.

Outside the southern Appalachian Mountains, the only breeding-season records are of individuals at Poore's Knob in the Brushy Mountains of

North Carolina at 793 m and 671 m in May and June of 1963, 1 at the same locality at 580 m in late July 1966, and 1 at 610 m near the Brushy Mountain Community Center on 10 July 1962 (Simpson 1968a).

AMERICAN GOLDFINCH *(Carduelis tristis).* — One female, in fresh condition, was killed by a car on Mt. Mitchell at 1922 m on 8 June 1986. Its brood patch was fully developed, indicating that it was probably breeding or preparing to breed. Several pairs of goldfinches were present at this site later in the breeding season.

Burleigh (1941) found a nest with 4 eggs in a yellow birch sapling on Mt. Mitchell at 1769 m on 1 September 1932 and stated that the goldfinch was regular to 1891 m and casual to the summit. Stupka (1963) had breeding season records from June through early October at 1739-1922 m in the GSMNP but cited no evidence of breeding. Stevenson and Stupka (1948) reported goldfinches near the summit of Roan Mountain.

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303 Robinson St., Rockingham, NC 28379. Accepted 28 August 1987.

BOOK REVIEWS

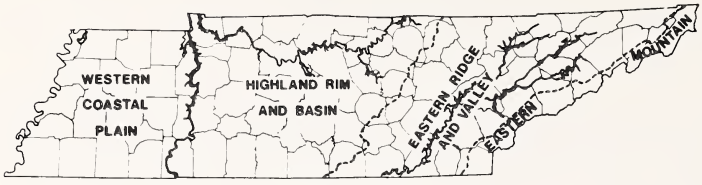
BIRDS WORTH WATCHING, by George Miksch Sutton. 1986. 207 pp., 60 color photos. Univ. Oklahoma Press, Norman.

George Sutton had essentially completed the manuscript for this book shortly before his death in 1982. With the combined efforts of the University of Oklahoma Press, the Oklahoma Ornithological Society, and others, the book has now been published. The result is a delightful collection of short essays on 60 species of birds, from Common Loon to House Sparrow. The writing style is lively and non-technical. Sutton's intimate knowledge of his subject shows in each account, as he describes his personal experiences from the arctic to the desert southwest. As might be expected, many of the accounts deal with birds in Oklahoma. Sutton describes anecdotal observations as well as the results of research he or his students carried out. Many of his observations were made around his house in Norman and on the university campus. A recurring theme in the accounts is how much we do not yet know about birds, including common species. For example, why does the male Painted Bunting not have a dull winter plumage, as do other members of its genus? Why do the males of some vireos, such as the Warbling Vireo, sing while on the nest? What is the purpose of the Mockingbird's wing-flashing? Sutton's description of the Northern Cardinal as the leading producer of Brown-headed Cowbirds in Oklahoma surprised me, as did some of the other information in these accounts. A color photograph illustrates each species account. A few are by well-known photographers; several other photographers were new to me. All of the photos are very good. I enthusiastically recommend this entertaining book. — CHARLES P. NICHOLSON.

COLLINS FIELD NOTEBOOK OF BRITISH BIRDS, by Roger Lovegrove with illustrations by Philip Snow. 1986. 130 pp., numerous illustrations. $21.95, softbound. Collins, London.

Lovegrove and Snow have teamed up to produce a pocket-sized field guide, which comes with a notepad and BTO checklist in a plastic binder. According to the introduction, this set was designed for the beginning to intermediate British birdwatcher. The introduction includes a primer on bird identification, a discussion on sketching birds by the artist, and a birdwatcher's code of conduct. The user of the book is encouraged to use the pages of the notepad to record and sketch his observations. The species accounts consist of annotated color sketches of 4 or 5 species per page, facing text accounts. Together the sketch annotations and text provide information on where and when to look for the bird, vocalizations and other behaviors, and field marks. Some rare and most accidental species are omitted. This package seems quite useful, but, for North Americans visiting Europe, I do not recommend it as a substitute for a regular field guide. — CHARLES P. NICHOLSON.

THE SEASON



SUMMER: 1 JUNE — 31 JULY 1987

The second summer of the Tennessee Breeding Bird Atlas project was exciting. The weather resembled that of the summers of 1985 and 1986 — hot and below average rainfall. June in eastern Tennessee was an exception to this, as temperatures and rainfall were near normal. This was not the case there during July, when virtually no rain fell during the last 3 weeks and daily high temperatures were consistently above 90°F. Despite these conditions, the only adverse weather-related effect on nesting birds mentioned in the following reports is mortality from heat stress at the Duck River Unit heronry.

Despite the weather, which may have affected birders more than the birds, numerous exciting breeding records were reported. A Savannah Sparrow was found with fledglings at Limestone in upper east Tennessee, providing the second state breeding record of this species. A pair of cormorants attempted to build a nest at the Duck River Unit, and a single cormorant was present at Reelfoot Lake. Numbers of wintering and migrant cormorants have greatly increased in recent years, and now it appears that the reestablishment of this species as a breeding bird in Tennessee is at hand. Bald Eagles had a good year, fledging 9 young from 5 nests. Ospreys continued their increase in eastern Tennessee, but their nesting results were mixed in middle Tennessee. Bewick's Wrens and Bachman's Sparrows were both reported in higher than normal numbers, and many of the Bewick's Wrens were in a habitat not previously searched for the species. Atlassers are slowly filling in the gaps in our knowledge of the breeding distribution of many species. See, for example, the accounts of the Cedar Waxwing in the following reports. Breeding evidence for this species was reported from middle and eastern Tennessee. Numerous other examples are found in the following reports. — CHARLES P. NICHOLSON.

Abbreviations used in the following reports include: ad — adult; EOP — end of period; ers — earliest fall migrant reported; imm — immature; max — maximum number reported in 1 county in 1 day; m.ob. — many observers; y — young.

WESTERN COASTAL PLAIN REGION — The season was marked with mild temperatures and very little rain. Shorebirds were the birds of the season. A new state record, the Pomarine Jaeger, was first seen in June at Paris Landing and remained through the end of the period.

Loon — Falcon: Common Loon: 20 Jun (1) Pace Point, HNC (JCR). Double-crested Cormorant: 15 Jun (1) REL (Paul Brown, Jim Johnston); 27 Jun (5) Upper Blue Basin, REL (RPF). Anhinga: 1 Jun (1 nest with y) REL

(Steve Pardue, Jimmy Cox); 28 Jun (3) REL (John L. Stokes). Yellow-crowned Night-Heron: 6 Jun (13 nests, 2 to 5 y each) Whitehaven, MEM; 1 nest near New Horn Lake Rd., SBC (BBC, LCC). Ruddy Duck: 7 Jun (9), 20 Jun, 4 Jul (8), 25 Jul (6) Robco Lake, SBC (BBC, LCC); 12 Jul (1 male) Tiptonville Sewage Lagoon, LKC (JCR). Osprey: 1 Jun (2 on nest) REL, Obion Co. (WGC). Mississippi Kite: 23 May (1) TN 104, Gibson Co. (WGC); 13 Jun (11 ad, 2 imm) Lauderdale Co. (JCR *et al.*); 6, 18 Jul (nest, 1 y) Chucalissa Museum, SBC (Kay Smith); 7 Jul (nest, 2 y) near Overton Park, MEM (BBC, LCC). Bald Eagle: 1 y fledged from nest in Benton Co. portion of Duck River Unit, Tenn. Nat. Wildl. Refuge (fide RMH). Northern Harrier: 7 Jul (1) Blue Bank, LKC (Walter Cook, Charles Gagen). Cooper's Hawk: 15 Jun (1) N of Savannah, HDC (BHS). Peregrine Falcon: 12 Jul (1) I13 (JCR).

Plover — Tern: 14 Jun (1) I13 (WGC). Lesser Golden Plover: 14 Jun (1) I13 (WGC). Semipalmated Plover: 24-28 Jul (1-4) ESL (GRP, VBR, JEW, MGW). Killdeer: 7 Jun — EOP (10-200) ESL (CHB, GRP, VBR, JEW, MGW). Black-necked Stilt: 7 Jun — 24 Jul (up to 10 ad, 3 nests, only 1 successful with 1 young) ESL (CHB, GRP, VBR, JEW, MGW). Lesser Yellowlegs: 5-28 Jul (8-34) ESL (CHB, VBR, MGW). Solitary Sandpiper: 5-26 Jul (2-15) ESL (CHB, VBR, JEW, MGW). Spotted Sandpiper: 28 Jun — 28 Jul (1-9) ESL (CHB, GRP, VBR, JEW, MGW); 4-30 Jul (1-4) I13 (WGC). Semipalmated Sandpiper: 22 May (60), 31 May (100), 1 Jun (1), 27, 31 Jul (25) I13 (WGC); 24-28 Jul (15 to peak of 233 on 28 Jul) ESL (GRP, VBR, JEW, MGW). Western Sandpiper: 14, 18 Jul (1, 3) ESL (CHB, VBR, MGW). Least Sandpiper: 28 Jun — 30 Jul (6-20) I13 (WGC); 5-28 Jul (3-255) ESL (CHB, GRP, VBR, JEW, MGW). White-rumped Sandpiper: 31 May (4) I13 (WGC). Pectoral Sandpiper: 14-28 Jul (17-431) ESL (CHB, GRP, VBR, JEW, MGW). Stilt Sandpiper : 4-24 Jul (1-2) ESL (CHB, VBR, MGW). Short-billed Dowitcher: 24-26 Jul (5) ESL (VBR, JEW, MGW). Wilson's Phalarope: 25 Jul (1 male, 2 females) Allen Steam Plant near ESL (BBC, LCC, Floy Barfield). **POMARINE JAEGER**: 28 Jun to end of period (1) Paris Landing State Park, HNC (Don Manning); details to be published. Ring-billed Gull: 12 Jul (1) I13 (JCR). Common Tern: 27 Jun (5) REL (RPF). Forster's Tern: 25 Jul (1) North Lake, SBC (BBC, LCC). Least Tern: 12 Jul (87, many fledglings) I13 (JCR). Black Tern: 5, 8 Jul (8, 3) Allen Steam Plant near ESL (CHB, VBR).

Flycatcher — Swallow: Willow Flycatcher: 31 May (1) North Fork of Obion River, WEC (JCR). SCISSOR-TAILED FLYCATCHER: 30 Jun (1) REL near New Markham (Jerry Coates, RPF). Horned Lark: 16 Jun (30, most juveniles) TN River bottomland between Pickwick State Park and Savannah, HDC (DJS). Purple Martin: 13 Jul (650) TN 78, Phillipy to Tiptonville, LKC (WGC). Cliff Swallow: 8 May (16+ new nests, no birds) I-40/Birdsong Exit, BNC; 3 Jun (30) US 641 and Birdsong Creek, mile 5, BNC; 4 Jun (20) Lick Creek in Big Sandy WMA, BNC, new location; 4 Jun (25) new US 70 bridge, east of Birdsong Rd./Cypress Creek, BNC; 3 Jun (12) TN 69A at Big Sandy, HNC; 11 Jun (200) Beech Bend, south of Perryville, DTC; 26 Jun: (12 fledglings) Pickwick State Park marina, HDC, (10) west of Counce, (12) TN 22/Snake Creek bridge, HDC, (300 nests and large number of imm) Pickwick Dam, HDC (all by BBC, LCC); 14 Jun (115+ birds, 100+ nests) TN 128, HDC (BHS).

Creeper — Warbler: Brown Creeper: 11 Jun (1) Old Cranetown, REL, Obion Co. (RPF). House Wren: 13 May (1) Martin, WEC (JCR); 12 Jul (1) levee at Phillipy Pits, LKC (JCR), same location as 25 May record. Eastern

Bluebird: 16 Jun (1 nest with 5 eggs) REL State Park, first nest "for quite some time" in Lake County as reported to RPF. Warbling Vireo: numbers lower in Decatur and Benton Counties, better in Shelby Co. (BBC, LCC). Yellow Warbler: 5 Jun (1) Mud Island, SBC (BBC, LCC); 28 Jun (1) Pickwick, HDC (BBC, LCC). Black-throated Green Warbler: 4 Jun (1 singing) 3 mi NE of Camden, BNC (BBC, LCC), latest transient in West TN by 7 days. Prairie Warbler: 31 May (1) Busseltown NWR, DTC (CHB); 1 Jun (6) BNC (DPB); 4 Jun (2 at 2 stops) Whiteville BBS (CHB); 7 Jun (5) Buena Vista, Carroll Co. (DPB); 23 Jun (2) NW Henderson Co. (BBC, LCC). Cerulean Warbler: 6 Jun (3) HNWR (BBC, LCC); 11 Jun (1) Lower Hatchie NWR (CHB, VBR, MGW); 16 Jun (1) Shelby Forest State Park, SBC (BBC, LCC). Black-and-white Warbler: uncommon to rare in lower West TN (BBC, LCC); 31 May — 8 Jun (1-2) Buena Vista, CLC (DPB). Swainson's Warbler: lower numbers in region, 10 on HNWR survey on 6 Jun (BBC, LCC).

Tanager — Goldfinch: Scarlet Tanager: 6 Jun (1) HNWR (BBC, LCC, Joe B. Guinn). Painted Bunting: found at 6 sites in Shelby County, 3 of the sites new (BBC, LCC). Dickcissel: 16 Jun (19 males, 1 female) TN River bottomland between Pickwick State Park and Savannah, HDC (DJS). **BACHMAN'S SPARROW:** 16 Jun (12 ad, 1 imm) Benton Branch Rd., HDC (DJS). Grasshopper Sparrow: 4 Jul (1 ad, 3 imm) floodplain N of Pickwick Dam, HDC (DJS). Song Sparrow: 4-5 Jul (1) ESL (BBC, LCC, CHB). House Finch: 25 May — end of period (pair feeding young, then 1-2 males, 2-3 females) Dyer Co. (Celia W. Hudson); nesting for the first time at Coffey Grounds, MEM (BBC, LCC). American Goldfinch: 6 Jun (22) HNWR (MTOS).

Locations: BNC — Benton Co.; CLC — Carroll Co.; DTC — Decatur Co.; ESL — Ensley Sewage Lagoons, Shelby Co.; HNWR — Hatchie National Wildl. Refuge, Haywood Co.; HDC — Hardin Co.; HNC — Henry Co.; I13 — Island 13, Lake Co.; LKC — Lake Co.; MEM — Memphis; REL — Reelfoot Lake; SBC — Shelby Co.; WEC — Weakley Co.;

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HIGHLAND RIM AND BASIN REGION: An extremely productive nesting season followed one of the less exciting spring migrations in some years. Weather conditions were generally hotter and drier than normal, like those in the summers of 1985 and 1986; June rainfall in Nashville was 2.25 in. (1.45 in. deficient), while that in July was 2.56 in. (1.15 in. deficient).

Many significant breeding records were established during the season. Perhaps the most exciting news concerns Bachman's Sparrow and Bewick's Wren. Damien Simbeck and John Robinson systematically searched for the former species in clearcut areas of many counties in the western half of the region and registered sparrows in four of them. An unexpected by-product of their search was the discovery of many Bewick's Wrens in clearcut habitat. The wrens frequented clearcuts where brushpiles were formed in the process of preparing the clearcut area for pine seedlings. The number of wrens found in Stewart County, in particular, was impressive.

Breeding Bird Surveys (BBS) in the region provided data on 96 species (average 1966-1986 was 93.8; average 1977-1986 was 95.3; range 1966-1986 was 88-99). No new BBS species was added during 1987, so the regional BBS species total remains 118. As in 1986, only 14 of the region's 15 BBS routes

were covered; thus, the lowest-ever totals cited below are once again slightly less significant than they would be had all 15 routes been run, while the highest-ever totals are somewhat more significant. Reported in lowest-ever numbers (an asterisk indicating species trending downward over the past 20 years) were Green-backed Heron (8), Horned Lark (0*), Gray Catbird (27), Loggerhead Shrike (14*), and Yellow Warbler (9). Highest-ever totals (an asterisk indicating species trending upward) were recorded for Canada Goose (86*), Turkey Vulture (73), Red-shouldered Hawk (8), Great Horned Owl (4), Eastern Phoebe (84), Purple Martin (86), Carolina Chickadee (114), White-breasted Nuthatch (36*), American Robin (331*), Yellow-throated Vireo (29), Northern Parula (13), Northern Cardinal (614), Blue Grosbeak (97*), and Brown-headed Cowbird (248).

Many rare or uncommon species breeding in the region were inadequately monitored this season, although they have received reasonably good attention in recent years. In particular this was true of Black-crowned Night-Heron, Willow Flycatcher, Tree Swallow, Cliff Swallow, Dickcissel, Lark Sparrow, and Grasshopper Sparrow. A greater consistency of reporting about these species, many of which are "Blue-listed," is desirable in the future. Let it be remembered that the price of knowing what is happening to bird species, like the price of freedom, is eternal vigilance. More positively, several species received much better coverage than during any recent breeding season, including Red-headed Woodpecker and Northern Oriole, as well as the aforementioned Bewick's Wren and Bachman's Sparrow.

I thank all the observers noted below for submitting data, the regional BBS cooperators for running routes and reporting results, and John C. Robinson for reviewing an early draft of this report.

Cormorant — Ibis: **DOUBLE-CRESTED CORMORANT:** 3 Jun (2) DRU (EB), this presumed pair engaged in nest-building behavior for several hours but failed to erect a platform; species formerly nested at this site and may do so again; see Western Coastal Plain Region. Least Bittern: 30-31 May (2 calling) MOP (O. Bedford Lochridge, William N. Jernigan, *et al.*), only report. Great Blue Heron: 19 Mar (187 active nests) Sinking Creek, Arnold Engineering and Development Center, FKC (*fide* Burline P. Pullin); 20 Apr (230 active nests) DRU (EB), the number of active nests declined to 189 on 18 May and to 163 (with many containing dead young) on 3 June; the primary reason for reduction in number of nests was heat stress; secondary reason was disturbance to nest site caused by maintenance work on flood-damaged dikes adjacent to the nests; it would appear that this maintenance work could have been timed to better accomodate the nesting needs of this and another rare breeder in the region (see entry for Osprey). Great Egret: by EOP very small numbers present in LWC (DJS), SUC (DTC, JPC), and SWC (JCR, DWB). SNOWY EGRET: 14-30 Jul (up to 4, including 3 imm and 1 ad) CCNWR (JCR, DWB), only report. Little Blue Heron: 20 Jul (48) CCNWR (DWB), max; also reported in MUC (DTC, JPC) and RUC (ALH). **TRICOLORED HERON:** 26-31 Jul (1 imm) CCNWR (JCR, Todd Fink, m.ob.), first SWC record and one of very few in region. Cattle Egret: 2 Jul (1 ad) 5 km SE of Carlisle, SWC (DWB); 9 Jul (1) CCNWR (JCR); 3 Jul-19 Aug (pair with nest and 2 young — photos) GSP (SJS, BHS, DTC, JPC), first NA breeding record and first fully documented regional breeding record; details will be published. Black-crowned Night-Heron: 6 Jul (100+ nests) GSP (JPC, SJS), 3rd year this rookery active; the Bordeaux, DVC, rookery was active

(PBH), but no details were reported; by EOP birds had dispersed and were reported from SWC (JCR, DWB), RUC (ALH), and RBC (DJHS). Yellow-crowned Night-Heron: 9 Jun (1 ad, 1 imm) Burgess Falls State Natural Area, PUC (BHS, SJS); 28 Apr-29 Jul (2 ad, 2 imm) Rock Creek in Tullahoma, CFC (Marjory B. Harper, Ruth Luckado, Chloe Peebles, Lillie Willard, MDH); only reports. WHITE IBIS: 20, 28-31 Jul (1 imm) CCNWR (JCR, DWB, m.ob), only report. Ibis sp.: 15 Jul (1) Childer's Creek, Woods Reservoir (Brian James, Douglas Pelren).

Duck — Vulture: American Black Duck: 30 Jun — 30 Jul (pair) Wartrace Lake, RBC (DJHS); 5 Jul (1) CCNWR (JCR); only reports. Blue-winged Teal: 5 Jun (pair) MOP (BHS), no nesting evidence secured; only report. Ring-necked Duck: all period (1 male) MOP (BHS, m.ob.). Hooded Merganser: 6 May (female with 4 small young) MOP (DJS, SJS), young were ¾ grown by 5 Jun (BHS); very few regional breeding records. Black Vulture: 10, 30 Jun (2 ad tending 1 hatchling) LBL (David H. Snyder, Michael Dinsmore), only breeding report; 15 Jun (2) FTC (RCH), considered unusual there.

Osprey — Eagle: Osprey: The DRU pair arrived on territory 24 Feb and was plagued by problems for the rest of the season. These birds built 4 nests but produced no young. Apparently maintenance work performed on flood-damaged dikes near their nests disturbed the birds and caused them to abandon 2 nests. The female incubated at the third nest for 6 weeks, but no young hatched. A fourth nest started late in the season was also unsuccessful. This pair had similar problems in 1986, though it successfully fledged young in 1984 and 1985 (EB), if the same male and female are still involved. Ospreys were active on Percy Priest Lake early in the season (Maxey H. Irwin), but results of their nesting efforts went unreported. Ospreys also built 2 nests on transmission towers in Old Hickory Lake, SUC; at least 1 of these was successful, as a begging juvenile was seen at the site 19 Aug (DTC, JPC — photos); this record constitutes the first successful nesting in the NA. Two birds were successfully hacked on Old Hickory Lake (C. Wick Comer); other hacking results were not made available. Bald Eagle: This species had a productive breeding season with 4 pairs fledging 8 young birds. The Westvaco, SWC, pair fledged 3 young for the second consecutive year (Sarah McClellan, JCR), while the LBL and Averitt, SWC, pairs fledged 2 and 1 young, respectively (*fide* JCR, RMH). On 9 Apr the nest of the Cordell Hull, JAC, pair was finally located (Richard Stark, Dale Massengill); this pair fledged 2 young later in the season (*fide* RMH). The Normandy Lake, CFC, pair was active around the nest from November, 1986, through early March, 1987 (B.J. Jenkens, MDH) but then vacated the area for reasons which probably include too much human disturbance; TWRA should rigidly enforce a no-entry zone for at least half a km around this nest. The only other eagle-related news involved sightings of adult birds on the lower reaches of the Duck River (*fide* RMH); see the Western Coastal Plain Region for other news about DRU eagles. Hacking at LBL continued this year with at least 8 birds involved; three were hacked at the newly inaugurated hacking site on Dale Hollow Lake, Clay Co. (*fide* RMH), although 1 of these died shortly after leaving the hack site.

Kite — Tern: MISSISSIPPI KITE: 14 Jun (1 imm) 1 km SW Milldale, RBC, near the South Fork of the Red River (JCR, DJHS), 4th NA record; together with the sighting of an immature in LWC during the spring of this year, this record suggests the species might be breeding along one or more of the

region's river systems. Sharp-shinned Hawk: 19 Jul (nest with 1 fledged young and 1 ad nearby) NW PYC (SJS, JCR), first published nesting record in region since 1978 (*Migrant* 49:92, 1978; but see Addenda). Cooper's Hawk: 18 Jun (1 ad) Union Hill BBS, Clay County (RCH, J. David Hassler); 8 Jul (1) CCNWR (JCR); 17 Jul (1) JAC (BHS, SJS); 18 Jul (1) Leatherwood Rd., SWC (JCR); only reports. Wild Turkey: 15 Jul (25) Keith Springs Mt., FKC (Philip L. Medley), max; 25 Jul (5 ad, 3 young) FCMR, SWC (JCR); only reports. Northern Bobwhite: BBS total of 435 was highest since 1980; an "increase over the last few years" was also noted in SWC (DWB). KING RAIL: 3, 22, 25 Jun (1 ad, nest with 10 eggs — photos) DRU (Carl Dowdy, Mark Musaus), rarely reported in region away from Goose Pond, GYC, especially with breeding evidence. American Coot: 21 Jun (1 ad) SW WYC (DJS, JCR), only report. Killdeer: 31 Jul (83) GSP (DTC, JPC), max. American Woodcock: 6 Jun (2) CCNWR (JCR); 14 Jun (1) Clarksville, MTC (JCR); 26 Jul (1) MOP (BHS, SJS, DTC, JPC); only reports. Least Tern: 8-14 Jun (1-2 ad) CCNWR (JCR), certainly a suggestive report, like a similar one in 1986; this species formerly nested along the Tennessee River and may still do so on Kentucky Lake and/or Lake Barkley.

Cuckoo — Swallow: Yellow-billed Cuckoo: 8 Jun (1 egg laid on the deck at observer's home, presumably not as a social comment) Love Lady, PIC (Jessie Baker, *fide* RCH). Ruby-throated Hummingbird: 19 Jul (18) PYC (JCR, SJS), feeding at blooms of *Mimosa* sp. in many locales. Red-headed Woodpecker: 20 reports from 13 counties; increasing in LWC (DJS), but considered down in SWC and elsewhere in the region (JCR). Willow Flycatcher: 14-30 May (up to 11 singing) CCNWR (JCR, DWB); 6 Jun — 20 Jul (up to 6 singing) CCNWR (JCR, DWB); 5 Jun (1 singing) Bear Creek WMA, SWC (DWB); 15 May (2) Lock B Rd., MTC (Annie H. Heilman); 27 May, 15 Jun (up to 4 singing) MOP (BHS); 25 Jun (1 singing) FTC (RCH); only reports; species not well monitored and reported at many traditional sites. Purple Martin: 22 Jul (790) SWC (DWB, JCR), max. Tree Swallow: 1 Jun/24 Jun (2/2) CCNWR (JCR/DWB); 20 Jun (15) DRU (JCR); 3 Jul (pair) GSP (DTC, JPC, SJS); also poorly monitored at several sites where nesting has occurred in recent years. Bank Swallow: 5 Jul (14) GSP (JCR). Cliff Swallow: 10 Jun (832) SWC (JCR), max; this record also involved many nests, most on the west-facing exposure of bridges, at 5 sites; 27 Jun (40) 8 km S Clarksville, MTC (EJW); 17 Jul (100) 3 sites along Cumberland R. in JAC (SJS, BHS); many sites not well monitored, especially in Cheatham County.

Bewick's Wren: 10 May — 7 Jun (7 singing/nest with y — photos) Tennessee Ridge, HOC (JCR/Donette Sellers), all birds found in typical suburban sites; 21 May — 31 Jul (2) Rt. 231 N of Hwy 70, WLC (Earline Berry, Vernon Berry); 14 Jun (1 singing) E WMC (SJS); 15-16 Jun (1 singing) headquarters, CCNWR (JCR); 21 Jun (3 singing) Bromley Rd. and Bear Creek Rd., WYC (JCR, DJS), found in brush piles created during fairly recent — 1-5 years old — clearcut operations; these birds were discovered as a serendipitous result of a search for Bachman's Sparrow; 15-24 Jul (**21**) 7 fairly recent Westvaco clearcuts, SWC (JCR); JCR recorded 11 birds in 4 different clearcuts while searching for Bachman's Sparrows; when he made a concerted effort to locate wrens in 3 other clearcuts, he found 10 more, resulting in the highest density of Bewick's Wrens per county recorded in the region and state in 2 decades. Part of this species' decline over the past 30 years may in fact be attributable to its using relatively unmonitored clearcut brushpiles for

nesting habitat instead of the more traditional suburban clutter sites most observers associate with the species, though it is unlikely that all of its decline can be attributed to this newly discovered habitat preference. In any event, JCR has certainly opened a new chapter in the history of Bewick's Wren biology in Tennessee.

Wren — Warbler: House Wren: 17 May, 7 Jun (1 singing) same site in Tennessee Ridge, HOC (JCR); 14 Jun (2 singing) Springfield, RBC (JCR, DJHS); 21 Jun (9) 3 locations in MTC (DWB); 26 Jun (1) Erin, HOC (DWB); 26 Jun (1) Burns Fire Tower, Dickson Co. (DWB); species continues to be recorded in new locations in the northern half of the region, mainly in urban or suburban habitats. Wood Thrush: 19 Jul (23 singing, from 0645-1500 despite temperatures above 90°F) PYC (SJS, JCR), max. Cedar Waxwing: 6 Jun (1) CCNWR (JCR); 6 Jun (2 ad) Wiley's Spring Bay, SWC (DWB); 9 Jun (1) Cookeville Lake, PUC (SJS); 1 Jul (2 ad) Model Fire Tower, LBL (DWB); 17 Jul (2 juveniles persistently pursuing 1 ad) Wartrace Creek Boat Ramp, JAC (SJS); only reports. White-eyed Vireo: 19 Jul (26) PYC (SJS, JCR), max. Black-and-white Warbler: 19 Jul (5) PYC (JCR,SJS), max. American Redstart: 6 Jun (1 singing) CCNWR (JCR), only report; none on BBS routes. Hooded Warbler: May-Jun (1 singing) Pinewood Rd., WMC (BHS, SJS), first bird in 5 years to remain in area during breeding season, following partial timbering (i.e., all trees greater than 40 cm in diameter) of the area in 1986; it was independently noted (RWS) that partial timbering in PUC resulted in fewer Hooded Warblers immediately around the observer's house and more in the partially timbered area somewhat farther away. Yellow-breasted Chat: 199 on regional BBS routes, a slight increase over totals for 1983-1986.

Dickcissel: 7 Jun (7) Glen BBS, GYC (DRJ); 14, 28 Jun (at least 37) NW and central RBC (JCR); 19 Jun (2) Belotes Bend BBS, SUC (PBH); 20 Jun (1) FCMR, SWC (JCR); 12 Jul (1 singing) central WMC (SJS); only reports. This species is monitored much less carefully than it deserves, since several authorities consider it to be declining in the eastern portion of its range, which includes this region. Fretwell (*Am. Birds* 31:923-932, 1977) and Robbins *et al.* (1986. The breeding bird survey: its first fifteen years, 1965-1979, USDI, Washington, DC, p. 108) noted the species' declining numbers through the late 1970's; there is no evidence to suggest that decline has ended. Observers in the region are urged to report all sightings, preferably along with county maps showing locations of birds during a given season. Such maps are available from the compiler on request.

Bachman's Sparrow: Apr-Jul (3) SE of Fall River, LWC, in Giles County (DJS), 3rd year at this site; 8 Apr (1) Loretto, LWC (DJS); 16 Jun (2 males) Lewis County DJS, Ed D. Crouch, Michael A. Beuerlein); 21-26 Jul (2 males) 1-year-old and 2-year-old Westvaco clearcuts in W SWC (JCR); see Western Coastal Plain Region. DJS cautions that these sightings do not mean that Bachman's Sparrows are increasing in the region, but only that persistent searching of proper habitat — recent clearcuts — will produce the birds in many counties throughout Tennessee. Bachman's Sparrow appears fated to exist in the state primarily where timbering practices create suitable habitat for short periods of time; however, rotational clearcutting may ensure the species a place in Tennessee for many years to come.

Sparrow — Finch: Lark Sparrow: 5 Jul (1) entrance to Cedars of Lebanon State Park, WLC (JCR); 28 Jul (1) CCNWR (JCR), probable migrant; only

reports. Grasshopper Sparrow: 7 Jun (12) Glen BBS, GYC (DRJ), max; species not well monitored or reported. Song Sparrow: 19-20 Jun (10) Green Creek in Waynesboro, WYC (JCR, DJS); 28 Jun (2 ad, 1 juvenile) Misery Swamp, MTC (JCR); WYC and MTC are the 28th and 29th of the region's 40 counties where Song Sparrows have been reported during the breeding season. White-throated Sparrow: all season (1 ad male) Murfreesboro, RUC (Clarence Greever, Helen Greever, John Patten); into June (1) South Tunnel, SUC (Bessie Hagan, *fide* JPC); rare but regular summer visitor to the NA. Northern Oriole: 11 Mar (used nest) E WMC (DJS, SJS), at site where pair occurred in June, 1985 (*Migrant* 56:112, 1985); 27 May (1 female) rest stop (west) on I-40, DIC (Ann T. Tarbell); 5 Jun (1 male) Bradyville BBS, CFC (SJS); 7 Jun (1 male) Tennessee Ridge, HOC (JCR); 8 Jun (1 male) N DIC (Ellen J. Walker); 14 Jun (1 male) RBC (JCR, DJHS); 15, 22 Jun (pair) Stewart State Forest, SWC (DWB); only reports, but more than usual; see Addenda. House Finch: 3 Mar (singing male), 6 Mar (nest material collected), 10 Mar (nest complete), 17 Mar (nest with eggs), 1 Apr (nest with young) downtown Nashville (DJHS); these sightings would make a fine sequence for the Cornell nest record program; 10-31 May (pair) Springfield, RBC (DJHS); 31 May+ (pair) Columbia, MUC (Anne R. Lochridge); 5 Jul (1) Tullahoma, CFC (MDH); throughout Jul (up to 19) Gallatin, SUC (DTC); species continues to expand as a breeder in the region.

Addenda: Sharp-shinned Hawk: 29 December 1984 (used nest) near Little Buffalo River, NW LWC (Morris D. Williams); early June 1985 (same nest with 5 eggs — photographed and measured) same site and observer; early July 1985 (several young in nest) same site and observer; site not active in 1986; not visited in 1987. Northern Oriole: 10 December 1986 (used nest) Hogan X Franklin Rds., DVC (Melissa A. Tucker, John Froeschauer).

Corrigenda: Migrant 57:110, 1986: in the entry for Song Sparrow change "This species seem" to "This species seems" and "the eastern edge of its range" to "the western edge of its range."

Locations: CCNWR — Cross Creeks National Wildlife Refuge, Stewart Co.; CFC — Coffee Co.; DIC — Dickson Co.; DRU — Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co.; DVC — Davidson Co.; FCMR — Ft. Campbell Military Reservation, Montgomery and Stewart Cos.; FKC — Franklin Co.; FTC — Fentress Co.; GSP — Gallatin Steam Plant, Sumner Co.; GYC — Grundy Co.; HOC — Houston Co.; JAC — Jackson Co.; LBL — Land Between the Lakes, Stewart Co.; LWC — Lawrence Co.; MOP — Monsanto Ponds, Maury Co.; MTC — Montgomery Co.; MUC — Maury Co.; NA — Nashville Area (includes Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, and Wilson Cos., as well as parts of Dickson and Trousdale Cos.); PIC — Pickett Co.; PUC — Putnam Co.; PYC — Perry Co.; RBC — Robertson Co.; RUC — Rutherford Co.; SUC — Sumner Co.; SWC — Stewart Co.; WLC — Wilson Co.; WMC — Williamson Co.; WYC — Wayne Co.

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EASTERN RIDGE AND VALLEY REGION — Weather patterns in the region this summer created the impression of two seasons — one near normal, and the other desert-like, beginning the second week of July. Rain-

fall during June was slightly below average in the Johnson City area (2.6 inches, -0.8 inch) and about 50% above average at Knoxville (6 inches), and Chattanooga (5.1 inches, +1.8 inches). June temperatures were near normal. Rainfall during July was above average at Knoxville (5 inches), but considerably below average at Johnson City (1.9 inches, -2.3 inches and Chattanooga (1.9 inches, -2.7 inches). Essentially all of this rain fell during the first week, leaving the last three weeks of July bone dry (this drought continued into early September). July temperatures were well above normal throughout the region, with highs reaching the low to mid-90's almost every day (also continued through August). As one observer noted, "being outdoors was no fun at all." The impact of this hot, dry spell on birdlife in the region received little comment; however, the near normal conditions in June apparently were conducive to successful breeding for most species. Moderate to heavy, but very localized, outbreaks of 17-year cicadas were reported.

The second TOS Breeding Bird Foray of the summer was held 19-21 June in Bledsoe County. About 20 observers participated in this Atlas "block-busting" weekend. Several findings are included in this report.

As expected, the southward migration of shorebirds began in early July. The water level in Chickamauga Lake was not greatly fluctuated by TVA this summer, resulting in no available shorebird habitat. At Kingston Steam Plant the habitat is improving, but is still far short of its former conditions. Farm ponds provided the only shorebird sites in the Johnson City area.

Reporters are reminded that the Cumberland Plateau is included in this region, for the purposes of this report.

Loon — Ibis: Common Loon: 28 Jun (1) NRL (JCH). Pied-billed Grebe: 1 Jun (1) HRA (JTP); 23 Jul (1) CHA (AMJ, EMR). American Bittern: 19 Jul (1) CHA (LHD), an early migrant? Great Blue Heron: 1002 pairs in 14 colonies in RNC, Rhea Co., MEC, McMinn Co., and HLC, with most colonies showing increases; Tennessee's largest, at Armstrong Bend (MEC), increased 18% to 520 active nests (counted from aerial photographs (*fide* BPP)). Great Egret: 3 Jul — EOP (1-6) HRA (m.ob.); 7 Jul (2) NRL (JCH); 9, 28 Jul (2,1) AUS (RLK); 13 Jul — EOP (1-2) SAB (KHD, LHD); 14-20 Jul (up to 19) EBF (CPN, JBO), an unusually large number there and at least 3 birds were color-marked from the Alabama Game and Fish/Tennessee Valley Authority stocking program at Scottsboro, AL; 17 Jul (15) CRL (RLK); 22, 26 Jul (1) Speedwell, Claiborne Co. (George W. McKinney); 27 Jul (1) KNC (*fide* JBO). Snowy Egret; 25, 25 Jul (2, 1) HRA (AMJ, JTP, CDB, LHD. Little Blue Heron: 5 Jul — EOP (3-25) HRA (m.ob.); 15 Jul — EOP (3) EBF (CPN); 16-22 Jul (1) SAB (KHD, LHD); 17 Jul (4) CRL (RLK). Cattle Egret: 21 Jul (1) HRA (AMJ, EMR). Black-crowned Night-Heron: discouraging news — the relocation site for the large CRL colony has not been found yet (German Creek site last used in 1985); the large Sevierville, SVC, colony was inactive, abandonment possibly due to nearby construction; the Pigeon Forge, SVC, colony was forced to relocate (from one privately owned tract to another about a mile away); 2 colonies near Fort Loudoun Lake, Loudon Co. did nest, one with about 60 pairs on TVA property and the other with about 100 pairs on private land nearby (forced relocation anticipated next spring); status unknown at the Long Island, RNC colony (5 active nests in 1985) (all *fide* BPP); elsewhere, 22 Jun — EOP (2 ad, 5 imm) AUS (RLK, GDE *et al.*), first

local nesting likely. Yellow-crowned Night-Heron: 4 nests produced 17 y at CHA (m.ob.). White Ibis: 26 Jul (1 imm) HRA (CDB, KHD, LHD).

Scaup — Grouse: Lesser Scaup: all summer (1 male) pond in JNC (RLK, MD) Osprey: 17 nests on Watts Bar Lake fledged 33 y (*fide* Ed Beddow, Bruce Anderson), continuing increase there; 3 Jul (3) Rankin Bottoms, COC (JAK). Sharp-shinned Hawk: reported from Union Co. (ARH, RDH) and BSC (KHD, LHD); 23-24 May (1 carrying food) Cross Mountain, CPC (CPN *et al.*). Cooper's Hawk: 4 y fledged Amnicola Marsh, HLC (James D. Rowell, Jr.); nest with 1 egg, ad. incubating, but later abandoned at Charleston, BYC (JDL); reported from 2 locations in BSC (RLK/SJS, BHS); single birds at 2 locations during Jun in WGC (RLK). American Kestrel: 3 active nests in BYC (JDL), "most ever reported in 1 year in CHA area" (*fide* KHD). Ruffed Grouse: 20 Jun (hen with 5 y) BSC (RLK, CPN); 12 Jul (1) Powell, KNC (ARH, RDH), not a regular location.

Shorebirds: Black-bellied Plover: 18 Jul (1) KSP (LHD). Semipalmated Plover: 25 Jul (2) KSP (AMJ, JTP), ers. American Avocet: 25 Jul (5) KSP (AMJ, JTP). Greater Yellowlegs: 3 Jul (3) KSP (KHD, LHD), ers. Lesser Yellowlegs: 3 Jul (2) KSP (KHD, LHD), ers. Solitary Sandpiper: 10 Jul (1) LST (RLK), ers. Spotted Sandpiper: 11 Jul (1) KSP (*fide* KHD), ers. Sanderling: 25 Jul (1) KSP (AMJ, JTP). Semipalmated Sandpiper: 17 Jul (1) KSP (*fide* KHD), ers. Western Sandpiper: 17 Jul (3) KSP (*fide* KHD), ers. Least Sandpiper: 11 Jul (3) KSP (*fide* KHD), ers. Baird's Sandpiper: 25 Jul (2) KSP (AMJ, JTP). Pectoral Sandpiper: 11 Jul (2) KSP (*fide* KHD), ers. Stilt Sandpiper: 3 Jul (1) KSP (KHD, LHD). American Woodcock: ad with 4 y in Mar at Crossville, Cumberland Co. (Gene West); 10 Jun — 18 Jul (1) AUS (RLK).

Cuckoo — Lark: BLACK-BILLED CUCKOO: 12 Jul (1) Straight Fork, SOC (CPN). Common Barn-Owl: 10 Jun (1) BOL (RLK); 11 Jun (nest with 1 y) JNC (RLK); nest with 3 y along Melton Hill Lake, near Knoxville (CPN, John Byrd); 29 Jun (pair with 5 y in silo) HRA (Carl Campbell *et al.*); 28 Jul (2) CHA (RAR). Barred Owl: 6 Jun (1) AUS (GWS), unusual in upper east Tennessee outside of mountains. Red-headed Woodpecker: 15 Jun (4 family groups) Ketner's Mill, MAC (RAR); 3 pairs in WGC (RLK *et al.*). Willow Flycatcher: 3 singing males, 22 Jun (nest with 4 eggs) AUS (RLK); 2 singing males LST (RLK); singing male Doake's Pond, CPC (JCH); pair White Pine, JEC (JAK); 19 Jul (pair with fledglings) Alcoa, BLC (JAK); 2 singing males HRA (JTP). LEAST FLYCATCHER: 7 Jun (2) near Oneida, SOC, on Smoky Jct. BBS route (CPN), 1 bird at same site last year; 20-21 Jun (1 territorial male in grove of red cedars) northern BSC, elevation 960 ft. (RLK, CPN); 20 Jun (pair) Rankin, COC, elevation 1200 ft. (JAK). Horned Lark: 17 Jul (13, including 4+ imm) LST (RLK).

Swallow — Vireo: Tree Swallow: 2 pairs at last year's nest site DOL (JAK). Bank Swallow: KSP site active (36 nest holes on 3 Jul) (KHD, LHD). Cliff Swallow: expanding and increasing — 2 bridges over BOL, 1 occupied several years (20+ birds, several nests), the other first used last year (30 nests this year) (RLK); Alfred Taylor Bridge over Nolichuckey River, WGC (6 birds, 1+ nests) (RLK), new site; 2 barns near JNC, 1 along Knob Creek used previously (6 nests), the other in SLC, not far from AUS (3 nests) (RLK); 18 nests on Solway bridge, Knox-Anderson Cos., first Anderson Co. record (CPN); Cherokee Dam plus 6 bridges over lake and 3 bridges over DOL (1 new site) (JAK). Brown-headed Nuthatch: nested in birdhouse

Hixson, HLC (RAR). Eastern Bluebird: very scarce in JNC area after spring snowstorm (*fide* GDE, RLK). Cedar Waxwing: 26 Apr (ad feeding y) southeast KNC (JAK); 14 Jun (pair building nest) Cumberland Heights, Grundy Co. (DRJ, Kathy Jacobson); 20 Jun (ad with y) BSC (KHD, LHD); 6 Jul (pair building nest) Conklin, WGC (RLK); 24 Jul (pair with 4 y) JNC (RLK), fairly common in JNC area all summer; also breeding evidence from SOC (CPN). Loggerhead Shrike: 25 May (4 y) Sequatchie Co. (RAR); 10 Jun (pair with 3 y) SLC (RLK); 15 Jun (broods of 3, 1, and 4 y) BSC (RAR); 2 pairs (1 with 2 y on 11 Jul) GNC (Richard and W. Ruth Nevius); breeding in BLC (ARH, RDH), JEC (Marcia L. Davis), and KNC (CPN); 2 single birds in WGC (RLK); population increase or better coverage/reporting? Solitary Vireo: 20-21 Jun (1) plateau portion of BSC (GRP, DPB, VBR).

Warbler — Siskin: Golden-winged Warbler: breeding evidence at several locations on plateau and in mountains in SOC and CPC (CPN). Chestnut-sided Warbler: 20-21 Jun (singing males at 2 locations) plateau portion of BSC (CPN, RLK, GRP *et al.*). Cerulean Warbler: 21 Jun (pair with 3 y) plateau escarpment in BSC (CPN, RLK). Summer Tanager: 1 territorial pair (no breeding evidence found) and 2 single sightings in WGC, where this species is rather scarce (*fide* RLK). DICKCISSEL: 7 Jun — 17 Jul (5 singing males, 1+ female, but no positive breeding evidence found) 2 sites at LST (RLK *et al.*), first JNC area summer record. LARK SPARROW: 15 Jun (1 ad, 1 y) Ketner's Mill, MAC (RAR), first CHA area breeding record. **SAVANNAH SPARROW:** 14 Jun — 27 Jul (pair, 2 y on 10 Jul) LST (RLK), second state breeding record, details to be published. Grasshopper Sparrow: fairly common in WGC (3 broods found) (RLK *et al.*), JEC (JAK), and valley portion of BSC (m.ob.). Northern Oriole: 19 Jun, 6 Jul (2 imm) WGC (RLK); 22 Jun (1) GNC (JoAnne Routledge). Pine Siskin: 1 Jun (1) Signal Mountain, HLC (Jonnie Sue Lyons), last lingerer.

Locations: AUS — Austin Springs, Washington Co.; BLC — Blount Co.; BOL — Boone Lake, Sullivan and Washington Cos.; BSC — Bledsoe Co.; BYC — Bradley Co.; CHA — Chattanooga; COC — Cocke Cos.; CPC — Campbell Co.; CRL — Cherokee Lake, Grainger, Hamblen and Hawkins Cos.; DOL — Douglas Lake, Jefferson and Cocke Cos.; EBF — Eagle Bend Fish Hatchery, Anderson Co.; GNC — Greene Co.; HLC — Hamilton Co.; HRA — Hiwassee River Area, primarily Meigs Co., but also Bradley, McMinn and Rhea Cos.; JEC — Jefferson Co.; JNC — Johnson City; KNC — Knox Co.; KSP — Kingston Steam Plant, Roane Co.; LST — Limestone, Washington Co.; MAC — Marion Co.; MEC — Meigs Co.; NRL — Norris Lake, Union Co.; RNC — Roane Co.; SAB — Savannah Bay, Hamilton Co.; SOC — Scott Co.; SLC — Sullivan Co.; SVC — Sevier Co.; WGC — Washington Co.

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EASTERN MOUNTAIN REGION — The weather for the period can be summed up in two words — hot and dry. June precipitation was 0.5 inches below average, and July precipitation was 3 inches below average. Extremely hot temperatures, in the mid-90's, were experienced from mid-July through the end of the month, which is unusual for the East Tennessee mountains. This weather pattern did not seemingly affect any of our nesting species. the Purple Martin reproduction rate more than made up for the

mortality suffered in early April. However, the bluebird population remains low, and will take at least another breeding season to recover.

Grebe — Woodcock: Pied-billed Grebe: 20 Jul (1) WTR (GDE), first fall report, early. Great Egret: 31 Jul (2) RNC (RLK, CFW, MD). Black-crowned Night-Heron: 22 Jun (1 ad), 27 Jun (1 ad, 1 imm) SHL (RPL). Canada Goose: 19 Jul (47) WTL (GDE); 31 Jul (54) RNC (RLK, CFW, MC). Northern Harrier: 21 Jun (1) Hump Mtn., RNM (EHS), breeding bird? Sharp-shinned Hawk: 22 Jun (1 ad carrying food) Limestone Cove (RLK, Brian Cross). Cooper's Hawk: 26 Jun (1) Unicoi, Unicoi Co. (GWS); 7 Jul (1) Siler's Bald, GSMNP (BHS). Ruffed Grouse: 28 Jun (1 ad, 3 imm) RNM (RLK). AMERICAN AVOCET: 28 Jun (1) Parksville Lake, Polk Co. (J. Craig Watson, Susan L. Watson). Solitary Sandpiper: 3 Jul (1, early) SJP (GDE). Least Sandpiper: 15 Jul (3) SJP (RLK), first fall report. Pectoral Sandpiper: 28 Jul (2) SJP (RLK), first fall report. American Woodcock: 30 Jun, 6 and 14 Jul (1 each day) Carver's Gap, RNM, elev. 5500 ft. (FJA, RP).

Gull — Flycatcher: Ring-billed Gull: 6 Jun (1), 17 Jul (1) WTL (GDE), unusual in summer. Forster's Tern: 31 Jul (6) RNC (RLK, CFW, MD). Black-billed Cuckoo: 4 Jun (1) RNM (FJA); 17 Jun (1) Cades Cove, GSMNP (BHS). Common Barn-Owl: nest reported in spring that fledged 3 y in mid Jun (GDE); 22 Jul (1 road kill) ELI (GDE). Great Horned Owl: 1-4 regular at SHL (RPL *et al.*). NORTHERN SAW-WHET OWL: 7 Jul (1 singing) Siler's Bald, GSMNP (BHS). Chimney Swift: 1 Jul (3 birds going in and out of hollow snag in dead tree) Clingman's Dome, GSMNP (BHS). Willow Flycatcher: 10 Jun — 12 Jul (pair) Siam Valley, ELI (GDE); 24 Jun (2) Shady Valley, JHC (GDE, RLK). Least Flycatcher: 7 Jul (ad feeding y) Siler's Bald, GSMNP (BHS), first reported evidence of breeding in the park in several years. Alder Flycatcher: 2 Jun to EOP (5 singing males) Carver's Gap, RNM (LHTOS).

Swallow — Crossbill: Cliff Swallow: 19 Jun (3-5) SJP (GDE). Brown Creeper: 9 Jun (1), 2 Jul (1) RNM (FJA, RP). HOUSE WREN: 7 Jul (1 nest) Carver's Gap, RNM, elev. 5500 ft. (FJA, RP). Golden-crowned Kinglet: 24 Jun (3 nests) Carvers Gap, RNM (FJA, RP). Cedar Waxwing: 24 Jun (4 nests) above Carver's Gap, RNM (FJA, RP). Loggerhead Shrike: 29 Jul (1) SJP (GDE), only report. Warbling Vireo: 10 Jun (pair) SJP, 24 Jun (pair) Siam Valley, ELI (RLK, GDE *et al.*). Golden-winged Warbler: 9 Jun (2 nests) RNM State Park (FJA). Parula Warbler: 23 Jun (1 nest) RNM State Park (FJA), fledged 4 Jul. Swainson's Warbler: 24 Jun (2 singing males) Backbone Rock, JHC (RLK, GDE). Canada Warbler: 2 Jun (4 singing males) RNM (GDE, GWS). Blue Grosbeak: 1 Jun — EOP (3-4 pairs) Carter Co. (GDE *et al.*), unusual in county. Vesper Sparrow: 21 Jun (2-4) Hump Mtn., RNM (EHS); 4 Jul (2) Round Bald, RNM (JTP); 5 Jul (2) JHC (EHS); 6 Jul (1) RNM (FJA). House Finch: numerous reports of y throughout area, many probably second and third broods (*fide* GDE). Red Crossbill: 1-30 Jun (3-7) Carver's Gap, RNM (FJA, RP *et al.*); 18 Jul (1) Clingman's Dome, GSMNP (JTP).

Locations: ELI — Elizabethton; GSMNP — Great Smoky Mountains National Park; JHC — Johnson Co.; RNC — Roan Creek, Johnson Co.; RNM — Roan Mountain, Carter Co.; SHL — South Holston Lake, Sullivan Co.; SJP — St. John's Pond, Carter Co.; WTL — Watauga Lake, Carter Co.; WTR — Watauga River, Carter Co.

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THE OFFICIAL LIST OF TENNESSEE BIRDS: ADDENDUM I

CHARLES P. NICHOLSON and STEPHEN J. STEDMAN

The Certification Committee of the Tennessee Ornithological Society met officially in Leiper's Fork on 7 February 1987 and in Pikeville on 20 June 1987, and unofficially in Memphis on 2 May 1987, to consider additions to and changes in the official list of Tennessee birds (Nicholson, *Migrant* 54:2-5, 1983). Attending these meetings were committee chairman *(ex-officio)* Charles P. Nicholson, members Dianne P. Bean, Stephen J. Stedman, James T. Tanner, and alternates Martha G. Waldron, David F. Vogt and Richard L. Knight.

Documentation of species reported in Tennessee from January 1983 through December 1987 was considered by the committee. In addition, some earlier records for which the committee had received recent documentation were discussed.

Acceptance criteria remained the same as those presented with the 1983 list. A species was added to the confirmed list when the committee determined that (1) there was an extant, verified specimen, photograph, or sound recording of it, or that (2) there were 3 independent observations of the species, each with satisfactory documentation. In the absence of evidence meeting criteria (1) or (2), a species was placed on the provisional list if 1 or 2 satisfactorily documented sight records of it were available to the committee. Acceptance of a species on either the confirmed or provisional list required a 3-0 vote by committee members or substituting alternates.

The committee was occasionally stymied in its efforts to bring the list up to date. Foremost among the reasons for this problem was the lack of **any** documentation for some species which were reported as occurring in the state since 1982, either as first state records or as second or third (or later) records. As a result, several species are entirely absent from this list, and several species are still provisional which ought to be confirmed. A more conscientious effort to document sightings of rare species is, therefore, requested of all members of the state's ornithological community.

In 1983 the official list included 334 species as confirmed in the state and 14 species as provisional. As a result of action taken by the Certification Committee during 1987, the new totals for those categories are 345 and 17, respectively.

Nine species were added to the list of confirmed species:

Harlequin Duck *(Histrionicus histrionicus)* — Two specimens taken 8 January 1984 on Norris Lake (*Migrant* 55:49, 1984), and one taken 5 January 1985 in Cheatham County (*Migrant* 56:51, 1985) were examined by experienced observers who confirmed the identifications. One of the Norris Lake birds has been deposited in the U.S. National Museum. A full written account of these records has not yet been published.

Clapper Rail *(Rallus longirostris)* — Photographs taken of a bird seen in Elizabethton on 8 April 1986 and held in captivity 8-17 April 1986 (*Migrant* 57:87, 1986) were examined by Brooke Meanley, Richard Banks and others and confirmed to be of this species. A full written account of this record has not yet been published.

Pomarine Jaeger *(Stercorarius pomarinus)* — Written documentation from 3 independent observers of a jaeger seen in Henry County on 28 June and 15 August to 4 September 1987 (*Migrant* 58:137, 1987; 59:27, 1988) confirmed that this species was involved. A full written account of this record has not yet been published.

Parasitic Jaeger *(S. parasiticus)* — Reexamination of a photograph of a jaeger seen in Franklin County 16-23 September and 27 October 1978 (*Amer. Birds* 33:187, 1979; *Migrant* 58:89-90, 1987) confirmed that this species was involved, as light edging was present on the juvenile's primaries; additional written documentation from Richard L. Knight and Harry C. Yeatman assisted in confirming the record. Photographs of a jaeger in Henry County on 6-22 October 1985 (*Migrant* 57:23, 1986; 57:44-46, 1986) confirmed that it was also of this species.

Long-tailed Jaeger *(S. longicaudus)* — Photographs of a jaeger in Lake County on 2-4 September 1984 (*Migrant* 56:17, 1985; 56:64-66, 1985) confirmed that this species was involved.

Common Black-headed Gull *(Larus ridibundus)* — Photographs taken of a gull in Davidson County from 13-22 March 1987 (*Migrant* 58:94, 97, 1987) confirmed that this species was involved. A full written account of this record has not yet been published.

Rufous Hummingbird *(Selasphorus rufus)* — Photographs of a bird in Rutherford County on 6-8 September 1983 (*Migrant* 55:21, 1984; 57:98-99, 1986) confirmed that this species was involved; written documentation of a sight record in Carter County 27 September and 11-12 October 1985 was also accepted by the committee. Records in Shelby County on 9 November 1976 and 26-29 September 1983 (*Migrant* 57:98-99, 1986) are to be treated as *Selasphorus* spp.

Say's Phoebe *(Sayornis saya)* — Photographs of a phoebe seen in Davidson County on 29 September 1985 (*Migrant* 57:28, 1986) confirmed that this species was involved; a short written documentation of a phoebe putatively of this species in Davidson County 27 and 30 September 1984 (*Migrant* 57:28, 1986) was not accepted (vote: 0-3). A full written account of these sightings has not yet been published.

Variegated Flycatcher *(Empidonomus varius)* — A photograph of a flycatcher seen in Lake County in May 1983 (*Birding* 16(5): back cover, 1984) confirmed that this species was involved. A full written account of this sighting has not yet been published.

Two species were upgraded from the provisional to the confirmed list:

Great Black-backed Gull *(Larus marinus)* — Written documentation of gulls seen in Sumner County on 27 January 1985 (*Migrant* 56:52, 1985) and in Henry County on 2-8 March 1986 (*Migrant* 57:74, 1986) indicated that this species was involved. These bring to 3 the number of satisfactorily documented independent sight records of these species. Written documentation about a gull putatively of this species seen in Henry County on 15 December 1986 was rejected (vote: 0-3). Earlier sightings of this species for which written documentation is not available include a bird seen 20 February 1984 in Stewart County (*Migrant* 55:46, 1984), and a bird seen in Davidson County on 19 and 24 March 1984 (*Migrant* 55:70, 1984).

Clay-colored Sparrow *(Spizella pallida)* — A specimen of this species taken in Hardin County on 17 October 1969 (*Migrant* 40:84-85, 1969) was determined to be extant in the LSU Museum of Zoology (No. 77386). Written documentation of a sparrow putatively of this species in Hardin County on 14 January 1986 (*Migrant* 57:51, 1986) was not accepted (vote: 0-3), as the observer expressed uncertainty about the rump color of the bird.

Action was taken to accept an additional record for a species on the provisional list, though the acceptance of this record left the species with fewer than 3 satisfactorily documented sight records; thus, it remains on the provisional list:

Glossy Ibis *(Plegadis falcinellus)* — Written documentation of an ibis seen in Sumner County on 3 May 1985 (*Migrant* 56:75, 1985) indicated that this species was involved. Recent records for which documentation is unavailable involve birds seen in Shelby County on 11 May 1983 and 21 May 1984 (*Migrant* 54:59, 1983; 55:67, 1984).

Action was taken to add 5 species to the list of provisional species:

Northern Gannet *(Sula bassanus)* — Written documentation of a bird seen in Robertson County on 29 November 1987 (*Migrant* 59:29, 1988) indicated that this species was involved. A full written account of this sighting has not yet been published.

Ross' Goose *(Chen rossii)* — Written documentation of single geese seen in Stewart County on 20 November 1986 (*Migrant* 58:23, 1987) and on 23 December 1987 to 5 January 1988 indicated that this species was involved. A full written account of the first sighting is in press.

Gyrfalcon *(Falco rusticolus)* — Written documentation of a falcon seen in Jefferson County on 13 January 1978 (*Migrant* 56:14-15, 1985) indicated that this species was involved, although the committee noted that the white color phase is the least likely to irrupt south.

Long-billed Curlew *(Numenius americanus)* — Written documentation from 2 observers who independently sighted a curlew in Lake County on 1 September 1985 (*Migrant* 57:22, 1986; 57:47, 1986) indicated that this species was involved.

Ash-throated Flycatcher *(Myiarchus cinerascens)* — Written documentation of a flycatcher seen 22 December 1985 in Sullivan County (*Migrant* 57:20, 1986) indicated that this species was involved. A full written account of this sighting has not yet been published.

The committee voted not to add 2 species to the provisional list despite the fact that sightings of them have been published:

Ruddy Shelduck *(Tadorna ferruginea)* — Photographs and sight records (*Migrant* 55:44, 1984; 57:106, 1986) of shelducks were discussed, but the concensus of the committee members was that escaped birds were probably involved (vote: 0-3).

Ross' Gull *(Rhodostethia rosea)* — Written documentation of a gull seen in Lake County on 19-28 December 1985 and possibly in January 1986 (*Amer. Birds* 40:590, 803, 1986; *Migrant* 57:8, 10, 1986) was deemed to be inconclusive (vote: 0-3).

The committee voted to table discussion about 1 species currently on the provisional list:

Western Tanager *(Piranga ludovicianus)* — Written documentation of a tanager seen in Obion County on 19 and 21 June 1985 (*Migrant* 56:107, 1985) was unavailable.

Written documentation for sightings of several species as yet unpublished was also considered by the Certification Committee, but in no case was a favorable (3-0) vote taken.

P.O. Box 402, Norris, TN 37828 (CPN) and Dept. of English, Tenn. Tech. Univ. P.O. Box 5053, Cookeville, TN 38505 (SJS). Accepted 1 March 1988.

BOOK REVIEW

ARKANSAS BIRDS, Their Distribution and Abundance. By Douglas A. James and Joseph C. Neal. 1986. Univ. of Arkansas Press, Fayetteville. 402 pp., maps, color and b&w photos, color plates, line drawings. $34.

Arkansas Birds is the fifth compilation of the birds of this state, the most recent of which was the 1951 second edition of William Baerg's *Birds of Arkansas*. It is a very attractive, large format book, and the illustrations include color plates by David Plank and Sigrid James Burch. The book begins with a chapter covering the history of Arkansas ornithology. Another chapter, "Arkansas birds and the environment," discusses climate, physiographic regions, and avian populations and habitat relationships. Wintering and breeding bird densities are presented for various habitats censused throughout the state. Results of avian-habitat successional studies carried out by Shugart, Fran James and others are also summarized. The following chapter, a feature absent from many state bird

(continued on page 21)

THE 1987 CHRISTMAS BIRD COUNT

DAMIEN J. SIMBECK

A total of 137 species was found on 24 Tennessee CBC's in 1987-88, with one additional species found during a count week. This additional species is new to Tennessee CBC records, though it cannot be added to the state CBC list.

Mild weather before the season again had its affect on most counts. The weather through the count period changed from one week to the next. The first week was fairly mild with scattered precipitation. The second weekend had heavy rains. The third week brought cooler temperatures, though the only count that did not get above the freezing point was one held on the very late date of 9 January. Wild food was reported as fair to poor on most counts, probably due to the dry summer of 1987.

Most notable this year were the second CBC records of Pectoral Sandpiper and Red-cockaded Woodpecker. Other unusual species were Red-throated Loon (4th record), Merlin (10th), Blue-gray Gnatcatcher (5th and 6th), Solitary Vireo (10th) and Orange-crowned Warbler (12th). Unusual species probably present due to the mild weather included Green-backed Heron, Osprey, Sandhill Crane (3 counts!), Spotted Sandpiper, House and Marsh Wrens, Gray Catbird, Palm Warbler, Common Yellowthroat, and Lincoln's Sparrow. Low numbers were found for most northern species, except Pine Siskin. This species was found on all but 2 counts, and in good numbers on most. Probably most notable for the period was the Ross' Goose, found at Cross Creeks NWR 3 days after the CBC there.

The Cookeville count appears in the summary for the first time. This survey was conducted in a circle different from that which was published several years ago. The Savannah count appears in the summary for the first time since 1973. The Reelfoot Lake count was not received prior to the publication deadline.

INFORMATION ON THE COUNTS

MEMPHIS — 20 Dec; 0600-1630; cloudy; temp. 45-53° F; wind AM-NW 12 mph, PM-N 15 mph; 40 observers in 8-14 parties; 125 party hours (95 on foot, 30 by car); 205 party miles (75 on foot, 130 by car). Good details submitted for Rough-legged Hawk (dark morph - LC), Spotted Sandpiper (DB, DD, MW), Pectoral Sandpiper (JW), House Wren (DM), Solitary Vireo (DB, DD, MW), and Lincoln's Sparrow (JW). 92 species. Dianne and William Bean, Carolyn Bullock, Fred Carney, Tina Carpenter, Robert Casey, Ben and Lula Coffey (compilers — 672 N. Belvedere, Memphis 38107), Dollyann Daily, Fred Dickson, Helen Dinkelspiel, John Duckworth, Harold Elphingstone, Robert Endres, James Ferguson, Bill Fowler, Lynn and Murray Gardler, Van Harris, Mike Hughes, Ginger and Robert Ilardi, Lee Johnson, David Kesler, Jeanne Kirkpatrick, Jo Levy, Selma Lewis, Franklin McCamey, Dwight Miller, Gerald Papachristou, George Payne, David Phillips, Ernest Restivo, Virginia Reynolds, Arlo and Noreen Smith, Richard Taylor, Phil Waldon, Martha Waldron, Jeff Wilson.

THE 1987 CHRISTMAS BIRD COUNT

	MEMP	SAVA	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	COOK	NICK	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Common Barn-Owl	--	--	--	2*	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
Eastern Screech Owl	--	--	6	7	1	7	9	1	3	--	4	--	4	10	10	3	2	5	4	1	7	2	15	2
Great Horned Owl	2	--	3	5	7	8	7	4	3	2	1	--	6	9	6	3	1	2	--	2	2	2	4	--
Barred Owl	3	1	3	2	4	2	1	2	--	--	12	--	2	7	2	1	2	--	1	--	--	1	1	--
Belted Kingfisher	14	4	27	10	12	23	3	16	24	9	8	14	12	32	42	17	10	45	18	10	26	6	9	6
Red-hed. Woodpecker	10	--	1	1	14	5	--	1	--	1	--	1	4	1	--	--	2	1	--	--	--	--	1	--
Red-bel. Woodpecker	174	11	58	39	73	39	20	48	20	23	10	17	47	58	58	30	30	55	13	21	13	6	13	--
Yel-bel. Sapsucker	38	9	14	6	11	10	13	14	6	12	4	1	14	25	4	5	20	17	12	3	3	2	13	4
Downy Woodpecker	130	9	72	33	61	69	18	62	20	25	13	6	36	71	42	36	31	46	70	41	45	14	36	9
Hairy Woodpecker	15	4	13	10	23	8	4	13	2	7	2	--	6	14	8	11	14	3	34	3	5	2	6	1
Red-coc. Woodpecker	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--
Northern Flicker	217	14	43	36	64	24	16	57	28	18	6	20	33	36	77	45	33	27	30	20	12	14	17	1
Pileated Woodpecker	15	5	9	25	10	12	7	13	1	--	--	3	17	39	23	28	28	15	45	13	13	2	17	1
Eastern Phoebe	8	1	1	6	1	1	1	--	--	3	1	1	16	12	3	4	6	4	14	7	1	1	--	2
Horned Lark	228	37	12	216	4	--	35	7	--	73	--	40	--	142	--	--	--	--	--	15	--	--	--	--
Blue Jay	455	37	223	151	361	46	59	186	96	93	66	263	244	134	185	96	179	224	62	101	123	64	92	26
American Crow	124	13	186	177	213	97	240	491	170	86	80	1151	392	344	476	218	200	1596	219	827	301	605	715	220
Common Raven	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12	--	--	--	2	6
Carolina Chickadee	313	26	105	102	134	108	77	204	128	67	43	20	120	243	294	86	184	309	281*	84	138	44	153	26
Tufted Titmouse	131	23	81	74	122	66	50	156	54	66	13	29	101	159	168	39	162	117	139	61	56	35	77	11
Red-br. Nuthatch	4	1	--	2	4	3	--	--	1	--	--	--	--	1	--	2	4	--	24	--	6	--	18	34
White-br. Nuthatch	--	7	24	59	26	7	1	36	2	--	6	7	48	60	55	6	51	25	72	13	27	13	32	4
Brown-h. Nuthatch	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14	2	--	--	--	--	--	--	--	--
Brown Creeper	14	6	7	7	12	2	2	3	9	--	--	--	4	12	9	5	14	8	31	5	11	1	17	4
Carolina Wren	194	26	60	26	67	70	21	72	59	11	11	7	68	100	136	74	104	177	66	48	41	20	65	11
Bewick's Wren	--	--	--	--	--	--	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
House Wren	1	--	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--
Winter Wren	11	2	9	4	8	8	1	5	1	--	1	--	11	17	9	2	11	13	11	1	3	4	8	5
Marsh Wren	--	--	--	--	--	2*	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--	--
Golden-cr. Kinglet	82	23	33	38	55	7	5	29	8	1	6	--	23	87	38	88	84	102	215	15	24	11	89	10
Ruby-cr. Kinglet	56	17	7	13	5	6	11	5	3	--	2	--	1	99	24	19	10	29	37	4	--	3	3	--
Bl.-gr. Gnatcatcher	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--
Eastern Bluebird	18	45	69	101	119	36	117	69	11	12	62	64	87	168	109	102	115	85	37	43	91	17	25	17
Hermit Thrush	13	1	13	5	11	15	15	--	3	--	1	--	7	32	13	13	13	5	7	1	2	2	10	3
American Robin	575	222	149	179	152	20	676	106	1481	15	98	2	280	67	151	159	234	74	49	11	17	1	71	10
Gray Catbird	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	1*
No. Mockingbird	187	14	28	45	107	31	46	101	61	45	28	74	46	69	123	57	42	117	11	34	39	41	39	8
Brown Thrasher	42	2	4	5	5	3	1	--	5	1	1	8	8	16	19	5	4	8	--	--	4	--	--	--
Water Pipit	3	--	--	1	--	--	--	1	1	--	--	--	30	16	1	6	--	2	--	--	--	--	--	--
Cedar Waxwing	99	34	319	92	279	--	17	22	1	14	21	20	150	165	582	713	391	193	76	101	210	52	114	20
Loggerhead Shrike	22	8	9	20	13	19	14	14	2	4	1	12	6	3	4	8	3	5	--	6	3	3	2	--
European Starling	6804	1160	227	1900	1078	642	402	2027	6646	50M	5960	763	2248	752	2818	735	577	1647	646	1311	1971	732	950	83
Solitary Vireo	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Orange-cr. Warbler	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Yel.-rumped Warbler	106	31	36	2	44	3	89	24	34	7	13	4	53	118	101	109	180	118	11	11	35	12	67	--
Pine Warbler	3	1	2*	--	--	--	--	--	--	--	--	--	--	33	31	27	2	1	3	4*	--	--	--	--

	MEMP	SAVA	CONW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	COOK	NICK	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Palm Warbler	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Common Yellowthroat	--	--	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Northern Cardinal	661	79	255	430	550	187	204	400	214	188	62	62	353	243	342	170	149	289	145	141	193	50	163	27
Rufous-sided Towhee	66	9	84	43	81	21	23	53	32	28	17	28	43	82	83	13	57	47	23	10	11	5	25	22
Am. Tree Sparrow	--	--	1	--	--	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chipping Sparrow	2	--	--	--	--	--	--	--	--	--	--	--	--	--	48	4	--	--	--	--	--	--	--	--
Field Sparrow	250	61	230	363	92	97	270	78	22	51	8	41	85	270	170	216	100	90	116	34	25	6	42	22
Vesper Sparrow	--	1	--	13	--	--	--	--	--	--	--	--	--	3	--	--	--	--	--	--	--	--	--	--
Savannah Sparrow	8	50	7	70	--	--	--	--	33	--	--	--	1	17	19	8	--	9	--	10	--	--	--	--
LeConte's Sparrow	--	1*	--	2*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fox Sparrow	133	4	7	4	3	11	8	3	4	4	2	1	4	14	19	10	6	--	--	1	--	--	--	--
Song Sparrow	405	86	323	143	88	60	79	95	97	67	24	24	234	602	670	233	208	275	136	70	127	38	189	76
Lincoln's Sparrow	1*	--	--	2*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Swamp Sparrow	146	35	349	8	56	82	34	12	12	--	--	3	29	162	156	21	10	18	2	7	--	--	2	3
White-thr. Sparrow	1030	79	248	183	222	120	29	282	163	71	26	29	145	698	322	130	309	392	158	138	104	37	282	90
White-cr. Sparrow	39	--	4	40	5	59	19	5	12	24	8	18	10	2	--	2	16	25	--	12	19	26	2	--
Dark-eyed Junco	349	122	285	286*	449	128	125	263	67	159	38	38	126	250	208	124	103	91	197	28	93	63	419	120
Red-throated Loon	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--
Common Loon	--	1	--	--	--	--	--	--	38	--	1	12	--	3	20	--	1	--	--	--	5	4	2	--
Pied-billed Grebe	10	50	11	1	1	--	--	2	38	1	2	31	2	372	286	66	4	25	--	--	17	4	11	1
Horned Grebe	--	16	--	--	--	--	--	--	41	--	--	15	--	19	100	--	--	2	--	--	--	2	2	--
Dbl.-cr. Cormorant	16	--	3	--	--	--	--	--	--	--	1	1*	--	--	--	4	--	--	--	--	--	--	--	--
Great Blue Heron	45	4	116	4	19	24	7	5	55	8	12	22	9	51	123	105	10	83	6	5	32	6	9	1
Green-backed Heron	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--
Blk.-cr. Night-Heron	--	--	--	--	--	--	--	--	8	--	--	--	--	--	--	--	--	19	--	--	39	--	--	--
Snow Goose	--	--	7*	--	--	2*	--	--	--	--	1*	1*	--	1*	--	11*	--	--	--	3*	--	--	--	--
Canada Goose	2	--	16M	171	26	234	12	44	951	84	158	546	77	54	14	333	114	383	--	216	328	99	139	--
Wood Duck	66	--	10	--	7	13	2	--	--	--	2	--	2	12	21	1	1	3	6	11	11	--	--	6
Green-winged Teal	--	--	242	--	--	9	--	--	1	--	--	--	--	1	12	24	1	--	--	--	--	--	1	1
Am. Black Duck	1	--	9M	5	--	24	3	--	9	--	25	52	1	--	11	49	--	10	--	4	75	4	18	21
Mallard	545	3	32M	45	38	147	12	28	442	--	250	396	--	167	256	620	75	53	24	164	700	219	60	8
Northern Pintail	--	--	257	--	--	5	--	--	1	--	6	--	--	--	2	19	--	--	--	--	15	--	--	--
Blue-winged Teal	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6*
Northern Shoveler	4	--	4	--	1	19	--	--	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--	--
Gadwall	2	--	534	--	--	25	--	13	8	3	--	9	--	480	74	149	--	63	--	6	8	8	--	--
American Wigeon	5	--	450	--	--	18	--	8	--	--	--	--	--	46	60	10	--	--	--	--	--	11	4	--
Canvasback	3	--	253	--	--	2	--	11	2	--	--	--	--	8	5	2	--	--	--	--	--	--	--	--
Redhead	--	--	--	--	--	13	--	--	--	--	--	--	--	--	5	--	--	--	--	--	--	--	--	--
Ring-necked Duck	45	--	800	--	--	248	--	26	2	6	20	4	98	104	10	13	--	6	--	4	--	10	--	--
Greater Scaup	--	--	--	--	--	--	--	--	--	--	--	--	--	76	120	12	--	--	--	--	--	--	--	--
Lesser Scaup	46	11	1	--	--	7	--	100	27	--	--	18	3	57	81	10	--	7	--	--	8	10	--	--
Common Goldeneye	1	--	1	--	--	14	--	2	20	1	--	17	--	48	67	--	--	1	--	--	1	--	2	--
Bufflehead	1	6	--	--	--	4	--	70	18	--	--	16	--	27	28	1	--	5	--	--	--	53	53	--
Hooded Merganser	--	8	113	3	1	21	--	1	--	1	10	20	81	12	20	107	--	33	--	--	--	64	--	12
Common Merganser	--	--	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ruddy Duck	--	--	--	2	--	7	--	--	3	--	--	--	--	69	63	--	--	--	--	--	1	3	--	--
Black Vulture	--	--	109	95	7	32	35	61	--	28	28	--	--	62	11	93	--	1	--	20	108	2	--	1

	MEMP	SAVA	CCNW	BUFF	CLAR	COLU	DRR	NASH	HICK	MURF	LEBA	HIGH	COOK	NICK	CHAT	HIWA	NORR	KNOX	GSMN	GREE	KING	BRIS	ELIZ	ROAN
Turkey Vulture	--	6	2	131	1	--	--	3	--	--	215	--	15	8	32	56	--	5	--	29	125	42	8	2
Osprey	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--
Bald Eagle	--	2*	6*	--	1*	--	--	--	--	--	--	1*	--	5*	--	4*	--	1*	--	--	--	--	--	--
Northern Harrier	7	6	4	6	1	3	3	--	1	4	2	2	--	--	--	1	--	--	--	1	--	--	--	--
Sharp-shinned Hawk	1	1	1	2	4	--	--	1	3	2	--	--	2	2	3	4	2	3	--	2	2	1	4	2
Cooper's Hawk	--	2	1	1	3	3	2	1	1	2	--	--	2	2	4	--	1	2	2	2	2	3	1	1
Red-shouldered Hawk	3	6	6	2	7	--	1	--	1	--	--	--	2	14	10	6	7	5	--	--	--	--	1	--
Red-tailed Hawk	77	9	33	38	22	19	20	18	12	20	8	10	17	31	30	13	4	29	7	12	11	6	5	6
Rough-legged Hawk	1*	--	--	1*	--	--	--	--	--	2*	1*	--	--	--	--	--	--	--	--	--	--	--	--	--
Golden Eagle	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1*	--	--	--	--	--	--	--	--
American Kestrel	23	6	8	32	19	25	26	20	18	23	22	46	33	15	13	17	18	14	16	20	16	19	14	--
Merlin	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Peregrine Falcon	--	--	--	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ruffed Grouse	--	--	--	--	--	--	--	--	--	--	--	--	--	2	--	--	1	--	3	--	--	--	1	--
Wild Turkey	45	--	--	28	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Northern Bobwhite	73	6	47	2	14	20	2	10	17	7	24	8	12	2	30	--	--	4	45	--	6	--	1	--
Sora	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
American Coot	129	257	15	--	--	--	--	--	111	--	13	10	--	11.3M	5M	507	1	47	--	--	27	34	--	--
Sandhill Crane	--	--	8*	--	--	--	--	--	--	--	--	--	147*	--	--	16	--	--	--	--	--	--	--	--
Killdeer	201	54	30	91	51	42	25	24	57	18	20	33	72	52	168	427	31	108	52	12	40	2	63	6
Spotted Sandpiper	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Least Sandpiper	260	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
Pectoral Sandpiper	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dunlin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	92	--	--	--	--	--	--	--	--
Common Snipe	36	--	22	21	3	14	--	--	6	1	--	--	9	2	6	37	4	9	--	--	--	--	1	--
American Woodcock	2	--	1	--	--	--	--	1	--	--	--	--	1	--	1	--	1	1	--	--	--	--	--	--
Bonaparte's Gull	2	--	4	--	--	14	--	--	15	--	--	--	--	--	97	6	--	53	--	--	--	--	--	--
Ring-billed Gull	337	91	249	--	21	17	--	1	1003	--	31	53	1	161	1307	108	--	553	--	--	79	90	8	--
Herring Gull	--	1	--	--	--	--	--	--	13	--	--	--	--	--	10	3	--	17	--	--	--	1	--	--
Rock Dove	998	5	16	55	61	234	31	55	371	62	68	54	112	117	502	13	70	660	116	100	823	160	132	28
Mourning Dove	640	83	293	356	185	371	397	480	153	133	81	257	578	281	466	37	215	446	465	651	165	126	271	1
Red-wing. Blackbird	2295	140	1553	310	275	118	3502	1190	12	45	18	9	36	22	5261	215	93	336	50	21	2	--	--	--
Eastern Meadowlark	293	67	62	250	101	112	49	55	46	49	24	100	220	92	109	172	17	90	110	128	16	3	21	--
Rusty Blackbird	268	1	7	--	13	620	3	5	22	10	--	--	5	--	250	--	151	--	--	--	7	--	--	--
Brewer's Blackbird	10	--	--	107	--	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Common Grackle	2893	3	11	580	294	2.3M	3.5M	219	2	50M	504	1063	8026	200	1308	303	--	6649	--	3	--	--	--	--
Brown-h. Cowbird	1977	5	5	125	258	455	120	74	2	2M	30	--	21	1	375	100	--	1	--	6	2	--	1	--
Purple Finch	22	--	18	74	92	20	108	10	14	30	34	4	41	37	34	26	159	38	20	63	86	20	85	9
House Finch	37	1	14	2	199	69	54	13	88	352	171	12	162	76	231	--	52	100	6	596	127	124	166	5
Red Crossbill	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	--	--	--	33	--
Pine Siskin	5	17	117	--	15	172	1	54	3	12	2	--	29	28	169	53	247	472	739	201	363	198	1387	1820
American Goldfinch	134	33	449	368	370	178	135	249	95	91	125	62	171	697	385	123	226	207	158	109	179	146	167	14
Evening Grosbeak	--	--	2	--	--	2	--	--	--	--	--	--	6	2	--	--	8	--	36	1	--	--	--	121
House Sparrow	821	31	5	179	308	85	25	65	60	450	75	327	185	160	52	5	9	85	45	58	41	18	199	63
Total Species	92	75	93	83	74	88	67	73	84	61	69	65	75	91	92	94	71	84	58	68	72	68	72	55

M=1000 * = See information on the counts. Underlined numbers tie or exceed previous record.

SAVANNAH — 22 Dec; 0430-1715; AM - mostly cloudy, PM - mostly sunny; temp. 41-57° F; wind WNW 0-15 mph; 3 observers in 2 parties; 19.5 party hours (5.5 on foot, 14 by car) plus 2 owling; 205 party miles (5 on foot, 200 by car) plus 24 owling. The eagles were adults. Good details submitted for Blue-gray Gnatcatcher and Leconte's Sparrow (both by DS). 75 species, 3256 individuals. Damien Simbeck (compiler — 117 Second Ave. N., Loretto 38469), Barbara and Stephen Stedman.

CROSS CREEKS NWR — 20 Dec; 0335-1715; cloudy; temp. 46-58° F; wind AM - SW 15 mph, PM - NW 10 mph; 11 observers in 7 parties plus 2 at feeders; 67 party hours (30.5 on foot, 35.5 by car, 1 by boat) plus 7 owling and 4 at feeders; 392.5 party miles (27.5 on foot, 361 by car, 4 by boat) plus 57 owling. 6 of the Snow Geese were of the blue form. 5 of the eagles were adults. Good details submitted for Sandhill Crane (DB), Pine Warbler (JD/JR) and Palm Warbler (present since 14 Dec - JD). Seen count week - **Ross' Goose** (excellent details - JR), Ruddy Duck, Wild Turkey. 93 species, 66,563 individuals. Donald Blunk, Robert Brown, Camille Crenshaw, Jerry Drewry, Annie Heilman, John Robinson (compiler — P.O. Box 215, Dover 37058), Chris Sloan, Barbara and Stephen Stedman, Ellen Walker, David Vogt. Names of feeder watchers not submitted.

BUFFALO RIVER — 2 Jan; 0130-0500, 0630-1720; partly cloudy; temp. 21-41° F; wind NNW 0-10 mph; 9 observers in 5 parties plus 1 at feeders; 44.25 party hours (17.5 on foot, 27.75 by car) plus 4 owling and 4 at feeders; 244 party miles (15.1 on foot, 228.9 by car) plus 53.4 owling. 1 of the juncos was of the "Oregon" race. Good details submitted for Rough-legged Hawk (EC, DaS), Merlin (DaS), Peregrine Falcon (MB, DaS), Com. Barn-Owls (EC, DaS), Orange - cr. Warbler (excellent details - EC), Leconte's Sparrows (present since 7 Nov - EC, DaS), Lincoln's Sparrow (EC, DaS) and "Oregon" Junco (MA, EC, DaS). Also seen 19 gull spp. Seen count week - Snow Goose (both forms), Green-winged Teal, Gadwall, American Wigeon, Lesser Scaup, and Rusty Blackbird. 83 species, 8098 individuals. Michael Beuerlein, Ed Crouch, David Ihrie, Chester and Dorothy McConnell, Ned Piper, Damien and Don Simbeck (compilers — 117 Second Ave. N., Loretto 38469), Morris Williams, Wylie Willis.

CLARKSVILLE — 2 Jan; 0500-1715; AM - clear, PM - partly cloudy; temp. 18-40° F; wind N 0-5 mph; 16 observers in 6 parties plus 11 at feeders; 51.25 party hours (25.25 on foot, 26 by car) plus 2 owling and 60 at feeders; 332 party miles (21.5 on foot, 310.5 by car) plus 2 owling. The eagle was an adult. 74 species, 7064 individuals. Joel Adams, Barbee Allen, Donald Blunk, Mike Filson, Debbie Gillis, Jerald and Juanita Harris, Annie Heilman (compiler — 429 Rivermont Dr., Clarksville 37043), Bill Hudson, Nancy Hughes, Thurston Lee, Debbie Main, Linda Mattes, Bill and Gloria Milliken, Edwin Peck, Haskell Phillips, Loise Podell, John Robinson, Sheila Smith, David Snyder, Mary Stephens, Edward Sullivan, Margaret VanKooijk, Ellen Walker, Barbara and Richard Wilbur.

COLUMBIA — 26 Dec; 0630-1700; cloudy with light rain; temp. 45-50° F; wind NW 0-10 mph; 12 observers in 7 parties plus 2 at feeders; 44.5 party hours (16.5 on foot, 26 by car, 2 by boat) plus 2 owling and 8 at feeders; 372 party miles (18 on foot, 346 by car, 8 by boat) plus 25 owling. The Snow Geese were of the blue form. Good details submitted for Common Merganser (AP), House Wren (BH), Marsh Wrens (BH, AL, WJ), and Common Yellowthroat

(WJ). Seen count week - Rough-legged Hawk, American Woodcock, and Cedar Waxwing. 88 species, 7936 individuals. Kenneth Anderson, Richard Figari, Daniel Gray, Brad Hammond, William Jernigan, Allyn Lay, Anne and Bedford Lochridge, George (compiler — 999 Sunnyside Drive, Columbia 38401), Cleo and Mark Mayfield, Jane Oakes, Allen and Dianne Pressnell.

DUCK RIVER RESERVOIR — 2 Jan; 0300-1700; partly cloudy; temp. 20-39° F; wind W 0-10 mph; 9 observers in 6 parties; 47 party hours (33 on foot, 14 by car) plus 5 owling; 246 party miles (16 on foot, 230 by car) plus 15 owling. 67 species, 10,853 individuals. Kenneth Anderson, Richard Figari, William Jernigan, Allyn Lay, Ann and Bedford Lochridge, George Mayfield, Allen (compiler — Rt. 6 Box 274G, Columbia 38401) and Dianne Pressnell.

NASHVILLE — 26 Dec; 0630-1630; cloudy with rain and heavy flooding; temp. 38-44° F; wind calm; 24 observers in 8 parties plus 5 at feeders; 59 party hours (10 on foot, 49 by car) plus 2.5 owling and 12 at feeders; 321 party miles (16.5 on foot, 304.5 by car) plus 3 owling. 73 species, 7899 individuals. Robert Brayden, Jean Cobb, Elizabeth Collins, Kinian Cosner, Annella Creech, Camille Crenshaw, Chris and Rowan DeBold, Milbrey Dugger, Clifton Dunn, Clara Fentress, Bill and Lucy Finch, Katherine Goodpasture, Paul Hamel, Barbara Harris, Robert Hatcher, Louise Jackson, Portia Macmillan, Jane Maynard, Richard Newton, Margorie and Oscar Patrick, Virginia Price, John Robinson, Christopher Sloan, Ann Tarbell (non-participating compiler — 6033 Sherwood Dr., Nashville 37215), David Vogt, Kenneth Walkup, Miriam Weinstein.

HICKORY-PRIEST — 3 Jan; 0500-1715; partly cloudy; temp. 34-43° F; wind N 0-10 mph; 16 observers in 6 parties; 50 party hours (16 on foot, 34 by car) plus 2 owling; 178 party miles (14 on foot, 164 by car) plus 35 owling. Good details submitted for American Tree Sparrow (KC). 84 species. Frances Abernathy, Linda Anderson, Kinian Cosner, Jerry (compiler — 4444 Dowdy Dr., Antioch 37013) and Susan Drewry, Beth and Hillis Evans, Katherine Goodpasture, Louise Jackson, Hazel and Lee Kramer, Dick and Grace Newton, James Phillips, David Vogt, Betty Worden.

MURFREESBORO — 9 Jan; began 0830; AM - mostly cloudy, PM - clear; 8″ snow cover; temp. 22-30° F; wind 5 mph; 16 observers in 8 parties plus 3 at feeders; 31 party hours (1 on foot, 30 by car) plus 22 at feeders; 253 party miles (1 on foot, 252 by car). Good details submitted for Rough-legged Hawks (RM, MT/RH, WH/AH, BH). Seen count week - Mallard and Water Pipit. 61 species, 104,569 individuals. Lou and Bill Erwin, C.E. Greever, Edith Hayes, Anne (compiler — 1018 Lawndale, Murfreesboro 37129) and Bob Hettish, Wilma and Richard Hunter, John Patten, Pat and Vic McCauley, Ruth McMillan, Ruth and Eugene Odom, Carol Plager, Albert Spence, Melissa Tucker, Ferrell Wilson, Terry Witt.

LEBANON — 19 Dec; 0630-1745; AM - mostly cloudy, PM - cloudy; light rain; temp. 38-50° F; wind SE 0-12 mph; 7 observers in 4 parties plus 3 at feeders; 22 party hours (3 on foot, 19 by car) plus 1 owling and 3 at feeders; 98 party miles (2 on foot, 96 by car) plus 3 owling. The Snow Goose was of the white form. Fair details submitted for Rough-legged Hawk (TG, RP). 69 species, 8289 individuals. Earline and Vernon Berry, Linda Bowman, Tim

Gorman, Ruth McMillan (compiler — Rt. 2 Box 141, Lascassas 37085), Kay and Larry Norris, Ray Pope, Ramona See, Melissa Tucker.

HIGHLAND RIM — 26 Dec; ended 1800; cloudy with intermittant light rain; temp. 45-55° F; wind calm; 18 observers in 7 parties plus 4 at feeders; 29 party hours (3 on foot, 26 by car) plus .5 owling and 2.5 at feeders; 307 party miles (3 on foot, 304 by car). The Snow Goose was of the white form. The eagle was an adult. Good details submitted for Double-crested Cormorant (JI). A scoter was deleted, no details. 64 species, 5663 individuals. [Starting time was reported as 1800 on 25 Dec - DJS.] Carol Barr, John and Lois Brunner, W.W. Dyer, K.O. and Nancy Gilliam, Marguerite Hernandez, Jerry Ingles, Ruth Luckado, Frances and Phillip (compiler — Rt. 2 Box 173B, Hillsboro 37342) Medley, Ronald LaRue, Cloe and Howell Peeples, N.D. Smith, Juliet Sisk, Wanda Winnett, Evelyn Wilson, Grady and Willa York, Mary Zimmerman.

COOKEVILLE — 17 Dec; 0300-1700; AM - mostly cloudy, PM - clear; AM snow flurries; temp. 20-36° F; wind NE 5-10 mph; 19 observers in 7-8 parties plus 8 at feeders; 67 party hours (27 on foot, 38 by car, 2 by boat) plus 6 owling; 265 party miles (17 on foot, 246 by car, 2 by boat) plus 19.6 owling. Good details submitted for Sandhill Cranes (RS/JR, SS). Also seen - 1 *Accipiter* sp., 2 wren spp., 16 sparrow spp., and 24 *Carpodacus* spp. 75 species, 15,375 individuals. Virginia Brown, Lida Cannella, Katherine and Sam Coward, Dot and Paul Crawford, Lillian Crawford, Kathleen Gardner, Dave and Robbie Hassler, Michael Hawkins, Maxey Irwin, Nancy Jarrell, Amy Johnson, Graham Kash, Mildred Lassiter, Charlotte Mannle, Nora Miller, Margaret Prescott, John Robinson, Richard Simmers (compiler — Rt. 6 Box 170, Cookeville 38501), Barbara and Stephen Stedman, John Stites, Vivian Stricklin, Joe Wahl, Carrel Warren.

NICKAJACK LAKE — 2 Jan; 0530-1830; AM - partly cloudy, PM - clear; temp. 28-45° F; wind AM - NE 10 mph, PM - E 6 mph; 22 observers in 9 parties; 86.25 party hours (62 on foot, 24.25 by car) plus 6.5 owling; 416 party miles (35.5 on foot, 380.5 by car) plus 44 owling. The Snow Goose was of the blue form. 4 of the eagles were adults. Good details submitted for Ruffed Grouse (BB, JL, PR). 91 species, 20,431 individuals. Benton Basham, Katherine Boyles, Christopher Haney, John Henderson, Daniel and Kathy Jacobson, Albert Jenkins, Starr Klein, Jonnie Sue Lyons, Barbara and Michael McMahan, Johnny Parks (compiler — 1160 E 17th St., Chattanooga 37404), Charles Robertson, Peter Robinson, Robin Rudd, Lemuel Srolovic, Amy and Cindy Stone, Jowayne Stone, Carl, Chris and Corby Swafford.

CHATTANOOGA — 19 Dec; 0530-1800; partly cloudy; temp. 36-59° F; wind S 0-24 mph; 30 observers in 12 parties plus 4 at feeders; 105 party hours (58 on foot, 47 by car) plus 4.5 owling and 22 at feeders; 418 party miles (52 on foot, 366 by car) plus 32 miles owling. Good details submitted for Marsh Wren. 92 species, 24,898 individuals. Carl Adams, Edith Bromley, Louise Cash, Bob and Sally Clark, Bob Crawford, Angela Davis, Ken and Lil Dubke, Edgar Grundset, Linda Harris, Paul Harris, Daniel Jacobson, Lenny Kafka, Starr Klein, Sandy Kurtz, Gilda Lyon, Jonnie Sue Lyons, Barbara and Mike McMahan, Tom Patton, Peter Robinson, Robin Rudd, Cindy Stone, Joe Stone, Bernie Tompkins, John Whitaker, Dan Williams, Dick Wodzenski.

HIAWSSEE — 1 Jan; 0600-1800; cloudy with moderate to light rain; temp. 36-52° F; wind NW 5 mph; 16 observers in 8 parties; 69 party hours (40 on foot, 29 by car) plus 3 owling; 373 party miles (41 on foot, 332 by car) plus 6 owling. The Snow Geese were of the blue form. The Golden Eagle (DB, LD) and 1 of the Bald Eagles were adults. Good details submitted for Blue-gray Gnatcatcher (BT, DW). Common Merganser (2) and Spotted Sandpiper (4) were deleted; no details. 94 species, 7533 individuals. Mark Armstrong, Del Blum, Angela Davis, Ken and Lil Dubke, Audrey and Ron Hoff, Tom Howe, Brian Locke, Robin Rudd (compiler — 7611 Davidson Rd., Chattanooga 37421), Boyd Sharp, Bernie Tompkins, Craig and Susan Watson, Dick Wodenski. Other names not submitted to compiler.

NORRIS — 19 Dec; 0545-2200; cloudy; temp. 35-49° F; wind calm; 13 observers in 6 parties plus 2 at feeders; 38.5 party hours (27.5 on foot, 11 by car) plus 3.75 owling and 3 at feeders; 266.5 party miles (21 on foot, 245.5 by car) plus 33 owling. Good details submitted for Green-backed Heron (BS). 71 species, 5220 individuals. Kim Atkins, John Byrd, Richard Clark, Marcia Davis, Barry Fleming, Grace Foster, Linda Fowler, Fred Holtzclaw, David Hankins, Audrey Hoff, George McKinney, Charles Nicholson (compiler — Box 402, Norris 37828), Boyd Sharp. Names of feeder-watchers not submitted.

KNOXVILLE — 20 Dec; 0600-1750; partly cloudy; temp. 45-66° F; wind SW 5-15 mph; 32 observers in 14 parties; 106 party hours (52 on foot, 54 by car) plus 4 owling and 1 at feeders; 582 party miles (44 on foot, 538 by car) plus 15 owling. The eagle was an adult. Excellent details submitted for House Wren (TH), poor details submitted for Gray Catbird. 84 species, 16,942 individuals. Jane Beintema, Betty and James Campbell, Richard Clark, Andrew Core, Marcia Davis, Julia Faulk, Barbara and James Finney, Loise Fuller, Ellie Gilmore, Paul Hartigan, Audrey Hoff, Tom Howe, Joseph Howell, Susan Hoyle, Hal Hubbs, Tony Koella, Bettie and James Mason, Robert Mistak, Charles Nicholson, Holly Overton, J.B. Owen, Paul Pardue, Robert Poling, Don Powers, Mark Reeves, Daniel Robbins, Martha Rudolph, Boyd Sharp, James Tanner (compiler — 417 Switzerland Dr., Knoxville 37920).

GREAT SMOKY MOUNTAINS NATIONAL PARK — 3 Jan; 0545-1715; cloudy with light rain; temp. 25-40° F; wind var. 0-5 mph; 24 observers in 12 parties; 99.5 party hours (57.5 on foot, 42 by car) plus .5 owling; 343.5 party miles (62 on foot, 281.5 by car) plus 5 owling. The chickadees were a mixture of Black-capped and Carolina. 58 species, 4943 individuals. Mark Armstrong, Jane Beintema, Betty and James Campbell, Howard Chitwood, Donald DeFoe (non-participating compiler — Great Smoky Mountains NP, Gatlinburg 37738), Julie Faulk, Barry Fleming, Louise Fuller, Ellie Gilmore, Paul Hartigan, J.C. Howell, Susan Hoyle, Lisa Huff, Burt Jones, Tony Koella, Bob Mistak, Holly Overton, Paul Pardue, Truett Patterson, Mark Reeves, Rebecca Roller, Martha Rudolph, Boyd Sharp, James Tanner.

GREENEVILLE — 28 Dec; 0630-1730; AM - mostly cloudy, PM - cloudy; rain; temp. 48-54° F; wind AM - NE 0-5 mph, PM calm; 17 observers in 9 parties plus 2 at feeders; 44.75 party hours (24 on foot, 20.75 by car) plus 26.5 at feeders; 276 party miles (17 on foot, 256 by car). The Snow Geese were of the white form. Good details submitted for Pine Warblers (BB, DN). 68

species. Gary Barriger, Ben and Phine (compiler — 1750 Gott Dr. Greeneville 37743) Britton, Sue Crosby, King and Margaret Gaut, Juanita Heckert, Don and Jim Holt, Richard and Willie Ruth Nevius, Daniel Nieves, Doug Ratledge, Jo Anne Routledge, Helen and Royal Spees, George and Jean Weaver, Virginia Williams.

KINGSPORT — 2 Jan; 0500-0630, 0700-1700; AM - cloudy, PM - partly cloudy; temp. 20-32° F; wind AM - SW 0-5 mph, PM - light, var.; 17 observers in 5 parties plus 2 at feeders; 37.2 party hours (14 on foot, 23.2 by car) plus 2 owling and 7 at feeders; 202.4 party miles (12.7 on foot, 189.7 by car) plus 14 owling. Good details submitted for Osprey (LH). Excellent details submitted for Red-cockaded Woodpecker (LH). Wood Thrush (1) deleted, details not convincing. 72 species. Frank Altom, Danny Blakely, Allen Cook, Sandra Driskell, Fritz Gerhardt, Jim and David Gillard, Bob Hale, Charles Hasbrouck, Lygia Hawkins, Wynn Herbert, Bruce Johnson, Rick Knight, Peter Morison, Betty Ottenfeld, Bob Quillen, E.E. Scott, Arthur Smith (compiler), Frank Williams.

BRISTOL — 2 Jan; 0800-1718; AM - cloudy, PM - clear; temp. 26-39° F; wind var. 0-10 mph; 10 observers in 5 parties; 33 party hours (12 on foot, 21 by car) plus 1.5 owling; 343.5 party miles (9.5 on foot, 334 by car) plus 22 owling; 68 species, 3429 individuals. Mr. & Mrs. James Boyd, Wallace Coffey, Bert, Ken and Loraine Hale, Joe Jackson, Richard Lewis (compiler — Rt. 3 Box 590, Bristol 37620), Don Litteral, Randal Smith.

ELIZABETHTON — 19 Dec; 0430-1730; AM - cloudy, PM - partly cloudy; temp. 28-55° F; wind AM - calm, PM - SW 0-5 mph; 17 observers in 5 parties; 52 party hours (31.5 on foot, 20.5 by car) plus 2.5 owling; 278.5 party miles (13.5 on foot, 265 by car) plus 9 owling. Excellent details submitted for Red-throated Loon (FA, RP, TL). 72 species, 6676 individuals. Fred Alsop, Bill and Samantha Bridgeforth, Jim Brooks, Brian Cross, Glen Eller (compiler — Rt. 9 Box 1340, Elizabethton 37643), Harry Farthing, Sally Goodin, Rick Knight, Tom Laughlin, Richard and Vickie Lewis, Rick Phillips, Ed Schell, Glenn Swofford, Gary Wallace, Frank Ward.

ROAN MOUNTAIN — 20 Dec; 0645-1645; AM - partly cloudy and foggy, PM - clear; temp. 44-63° F; wind SW 10-20 mph with gust to 30 mph; 9 observers in 2 parties; 16.5 party hours (13.5 on foot, 3 by car) plus 1 owling; 82 party miles (8 on foot, 74 by car) plus 1.5 owling. Excellent details submitted for Blue-winged Teal (FA, BC, TJ, TL, GS) and Gray Catbird (FA, BC, TJ, GS). 55 species, 3020 individuals. Fred Alsop, Jim Brooks, Brian Cross, Glen Eller (non-participating compiler), Tim and Marie Jones, Rick Knight, Tom Laughlin, Glenn Swofford, Frank Ward.

Corrigendum: Migrant 58:4, 1987: the total of Red-winged Blackbirds for Memphis should be 111M, not 111.

117 Second Ave. N., Loretto, TN 38469

THE WINTER ROADSIDE RAPTOR SURVEY IN TENNESSEE: 1986-1987 RESULTS

STEPHEN J. STEDMAN

Abstract — The first state-wide Winter Roadside Raptor Survey (WRRS) in Tennessee took place during the winter of 1986-87. Eleven raptors were recorded on the surveys in addition to the Loggerhead Shrike. The number of each species/100 km of road surveyed in the state and in each region of the state (West, Middle, and East) was obtained, as was the number of birds/100 km in December, January, and February. Data for common species — Black Vulture, Turkey Vulture, Red-tailed Hawk, American Kestrel, and Loggerhead Shrike — were sufficient to compare numbers of birds/100 km between Middle and East Tennessee and from month to month. Insufficient data were collected to compare reliably the less common raptors — Bald Eagle, Northern Harrier, Sharp-shinned Hawk, Cooper's Hawk, Rough-legged Hawk, and Merlin — from region to region or from month to month.

Roadside surveys of raptors have been conducted and reported for more than 50 years in North America. Their primary purpose has been to provide an index of the abundance of wintering raptors (Nice 1934, Leopold 1942, Craighead and Craighead 1956), though recent efforts have been made to use them in order to estimate the total population of birds of prey (Wolffinden and Murphy 1977, Andersen *et al.* 1985) and to analyze habitat and perch preferences (Koplin 1973, Preston 1980).

During the current study, surveys were conducted with the objective of obtaining baseline abundance data in such a manner as to ensure accurate comparison with data collected in future winters. Surveys took place in 36 of the Tennessee's 95 counties (2 in West Tennessee; 22 in Middle Tennessee; and 12 in East Tennessee). Eighty surveys were contributed to the overall effort; 72 surveys were accepted for use (of the 8 which were unusable, 4 were not used because the route surveyed was less than the required 100 km in length, and 4 were not used because necessary data were missing). Eighteen counties were surveyed a single time; 5 counties twice; 11 counties 3 times; 1 county 5 times; and 1 county 6 times. Twenty surveys took place in December, 1986; 20 in January, 1987; and 32 in February, 1987. The surveys covered 8432 km (241 in West Tennessee; 5581 in Middle Tennessee; and 2610 in East Tennessee). Sixty-nine cooperators participated in the surveys (5 in West Tennessee; 43 in Middle Tennessee; and 25 in East Tennessee); 4 cooperators worked in 2 regions.

Methods — Surveys were conducted during 1 calendar day between 1 December 1986 and 28 February 1987. Surveys began by 1100 (EST or CST) and lasted at least 2 hours, though they could run as long as 10 hours. Each survey was run within the boundaries of 1 county and was at least 100 km (62 miles) in length with as little backtracking as possible and with any backtracked km not counted in the total distance; surveys averaged 117.1 km. Cooperators used motor vehicles to survey roadsides. Unpaved roads, secondary roads, and lightly trafficked primary roads were the favored

corridors of each route; heavily trafficked roads and interstate highways were avoided. Cooperators drove at speeds of 30-50 km/hr. and generally stopped when a raptor or shrike was observed or when promising raptor habitat was approached.

Cooperators were asked to record the time and their vehicle's odometer reading when the survey began and ended. They also recorded the exact route they covered, by tracing it onto a county map as they ran the route. Raptors and shrikes were counted along this route, and the location of some species (kestrels, shrikes, and rare raptors) was recorded on the map. In addition to counting all raptors and shrikes, cooperators were asked to age and sex raptors whenever possible and to keep separate totals for each age/sex group. Data were recorded on a specially prepared field and summary sheet, to which the route map was attached; these were then sent to the project coordinator for analysis. Cooperators were asked to keep copies of the summary sheets and route maps. The latter will be used in future years to run identical WRRS routes.

Results — Most results of the data analysis were achieved by including data from each of the 72 routes in the calculations; however, data from 10 routes, each of which was run 3 times over an identical route, were analyzed separately; these results were compared to those resulting from the overall analysis (Table 1). A slightly different picture of month by month changes in raptor populations results from the data analyzed for the 10 surveys run over identical routes than for the data analyzed from all routes. This disparity probably resulted from the low number of surveys which were run over identical routes during the 3-month WRRS period, but the difference could have been due to better route selection for raptor habitat and/or better observers on these routes. Data from all routes analyzed together were deemed to be more accurate than those from the 10-survey method of analysis.

Consequently, the results of the data analysis were achieved by lumping all data from the 72 surveys together; however, counties which were surveyed 2-6 times were suspected to be overrepresented in the findings. Therefore, a check on the validity of the lumped data was performed. Data for a common species — Red-tailed Hawk — were analyzed both by (1) averaging all raw data and (2) by averaging the data of counties with 2 or more surveys and including only the average figure in the calculations. Although the abundance figures (Table 2) obtained by using the second of these methods were slightly lower than those obtained using the first method, the differences were not significant ($T=0.1182$, $p=0.9061$).

Finally, data obtained on 48 WRRS in Middle Tennessee during the 1986-87 season were compared to data obtained on 18 WRRS in the same region during the 1985-86 season (Stedman 1986) in order to obtain a preliminary indication as to whether or not the WRRS might show value as a tool in analyzing trends in raptor populations over long periods of time. Results (Table 3) of this comparison show that 4 species were seen in about the same abundance during the 2 winters and 6 species were seen in differing abundance during the 2 winters; these differences can mainly be attributed to the much lower number of routes run in the first of these 2 winters, as well as to the fact that few of the surveys run during the 2 winters were over identical routes.

Table 1. Month-by-month Raptor Numbers (Birds/100 km) Using Two Methods of Analysis.

	Data from 10 surveys over identical routes			Data for all surveys		
Species	Dec	Jan	Feb	Dec	Jan	Feb
Black Vulture	19.7	6.6	15.5	10.8	4.7	7.9
Turkey Vulture	2.2	0.7	13.7	4.2	2.4	9.1
Northern Harrier	0.7	0	0.3	0.5	0.3	0.2
Red-tailed Hawk	9.0	6.5	7.6	7.7	6.9	6.6
American Kestrel	17.3	15.4	16.1	12.4	11.1	10.9
Loggerhead Shrike	9.6	5.3	7.2	6.2	4.2	3.5

Table 2. Red-tailed Hawk Data in Tennessee Using Two Methods of Analysis.

	Data using raw data from all surveys	Data using one average figure/county
Number of Counts	72	36
Total km Surveyed	8432	4378
Total Red-tailed Hawks	591	291
Red-tailed Hawks/100 km in Tennessee	7.01	6.65
Red-tailed Hawks/100 km in West Tennessee	11.6	11.6
Red-tailed Hawks/100 km in Middle Tennessee	7.99	7.65
Red-tailed Hawks/100 km in East Tennessee	4.48	4.07

Table 3. Raptors/100 km in Middle Tennessee, 1985-86 (18 surveys) vs. 1986-87 (48 surveys).

SPECIES	1985-86	1986-87
Black Vulture	12.8	9.1
Turkey Vulture	9.6	4.8
Bald Eagle	0.48	0.14
Northern Harrier	0.69	0.34
Sharp-shinned Hawk	0.09	0.11
Cooper's Hawk	0.31	0.11
Red-shouldered Hawk	0.57	0.38
Red-tailed Hawk	6.3	8.0
Rough-legged Hawk	0.04	0.04
Merlin	0	0.02
American Kestrel	11.4	12.2
Loggerhead Shrike	3.4	5.4

The findings of the study are hereinafter discussed from a statewide perspective and then at greater length from the perspective of the regions of the state and the months of the survey.

Statewide Results: A major purpose of the WRRS is to provide baseline data against which results from future years can be compared; therefore, the statewide results of the study (i.e., raptors/100 km in Tennessee; Table 4) have little meaning in themselves at this point; their importance can only be demonstrated after the passage of time, perhaps as few as 5 years, so far as trends in the numbers of raptor populations are concerned. More immediately, statewide data will probably detect irruptions of certain boreal species, such as Rough-legged Hawk, and perhaps provide a more accurate method of judging the relative magnitude of these irruptions than is currently available.

Regional Results: Only 2 WRRS routes were run in West Tennessee, a figure too low to generate meaningful results for comparative purposes. Therefore, the presentation of data (Table 4) from that region of the state is more for the sake of consistency than for any other reason.

The results (Table 4) obtained from 48 WRRS routes in Middle Tennessee and 22 in East Tennessee allow for cautious comparison of raptor popula-

Table 4. Results of the 1986-87 Winter Roadside Raptor Survey in Tennessee.

	SPECIES											
	BV	TV	BE	NH	SS	CH	RS	RT	RL	ME	AK	LS
Number of Surveys on which Recorded (of 72)	46	49	8	19	14	9	15	71	2	1	70	62
% of Surveys on which Recorded	64	68	11	26	19	12	21	99	3	1	97	86
Total Birds Recorded in State	669	480	11	26	19	9	31	591	2	1	959	375
Birds/100 km in Tennessee	7.93	5.69	0.13	0.31	0.23	0.11	0.37	7.01	0.02	0.01	11.37	4.45
Birds/100 km in West Tenn. (2 surveys)	18.70	10.81	0	0.42	0.83	0.42	0	11.6	0	0	9.14	4.57
Birds/100 km in Middle Tenn. (48 surveys)	9.14	4.80	0.14	0.34	0.11	0.11	0.38	7.99	0.04	0.02	12.20	5.39
Birds/100 km in East Tenn. (22 surveys)	4.37	7.13	0.11	0.23	0.42	0.08	0.38	4.48	0	0	9.81	2.41
Birds/100 km in December	10.8	4.2	0.08	0.47	0.13	0.13	0.21	7.71	0.08	0	12.38	6.19
Birds/100 km in January	4.7	2.4	0.17	0.30	0.17	0.09	0.77	6.93	0	0	11.13	4.24
Birds/100 km in February	7.9	9.1	0.13	0.21	0.32	0.11	0.21	6.61	0	0.03	10.92	3.48

tions in those 2 regions of the state. The results of comparing the more common raptors are considered to be more reliable than the results of comparing the less common raptors. It was expected that Black Vultures would be more common in Middle Tennessee than in the east, but it was not expected that Turkey Vultures would be about 50% more abundant in East Tennessee than in the middle region of the state, a percentage which will be watched closely in future years. Data are too few to comment with assurance about the Bald Eagle results generated by the surveys, though it was somewhat unexpected that this species was as abundant as it was in East Tennessee; this result may have been an artifact of sampling, as several routes in East Tennessee appear to have been purposely laid out in good eagle habitat, though the same can be said of some routes in Middle Tennessee. Northern Harriers were somewhat more abundant in Middle Tennessee than in the east, but the number of birds encountered was too small to offer conclusive results. Even smaller numbers of accipiters were recorded; the Sharp-shinned Hawk was recorded in notably greater abundance in East Tennessee than in Middle Tennessee, while Cooper's Hawks were counted about equally in these 2 divisions of the state. Red-shouldered Hawks were detected in identical abundance in the 2 regions, but Red-tailed Hawks were about 40% more abundant in Middle Tennessee than in the east. Also, among 485 Red-tailed Hawks which were aged, 84.7% were adults and 15.3% were immatures, a slightly higher percentage of adults than was obtained in Middle Tennessee alone during the winter of 1985-86 (Stedman 1986). The only Rough-legged Hawks and Merlin were recorded in Middle Tennessee. American Kestrels were about 20% more common in Middle Tennessee than in the east. Of 788 kestrels which were sexed, 57% were males and 43% were females; identical results were obtained in Middle Tennessee only during the winter of 1985-86 (Stedman *op. cit.*). Loggerhead Shrikes were more than twice as abundant in Middle Tennessee as in the east.

Monthly Results: It was hypothesized that the WRRS would detect the winter mortality of some species of raptors and that diminishing numbers of birds/100 km would be recorded over the course of the season. This hypothesis assumes that the statewide raptor population is reasonably stable from December through February with migration into and out of the state roughly balancing one another during the period, that detectability of raptors is constant during the period (i.e., not variable due to the onset of courtship behavior, etc.), and that variables created by differing weather, observers, etc., do not unduly bias the results; obviously not all these assumptions can be proved to hold true, but their influence over the results was probably minor. The data collected for 3 common species apparently support the proposed hypothesis, especially if they are correlated with the widely held theory that small birds live shorter lives on average than large ones (Pettingill 1970). The smallest of these 3 common species, the Loggerhead Shrike, displayed the expected pattern of winter mortality most noticeably (Table 4), while 2 larger species, American Kestrels and Red-tailed Hawks, showed moderate and slight abundance declines, respectively, over the course of the winter. Northern Harriers declined dramatically from December through February, though it must be noted again that small numbers are involved. The data for both vultures failed to follow the expected winter pattern of declining numbers; each was recorded in lowest numbers in January with a considerable increase reflected in the February

data, perhaps indicative of these species' early migration. Red-shouldered Hawks reversed the pattern of the vultures, being much more common in January than in December or February; this result may be an artifact of sampling, since several counties with considerable riverbottom habitat (e.g., Stewart) were censused in January but not in the other 2 months. Bald Eagle and Cooper's Hawk data showed no especial pattern in this regard, but Sharp-shinned Hawk data reflected increasing numbers of birds as the winter wore on, a somewhat perplexing trend perhaps more due to the low numbers recorded of this species than to any other reason.

Discussion — Clearly a major objective of future WRRS seasons should be to survey West Tennessee more thoroughly than occurred during this first season. Until at least 10 of the 21 counties included in that region are represented in the survey, it will be difficult to compare the abundance figures obtained in Middle and East Tennessee with data obtained for similar parameters in West Tennessee. The low number of routes run there also biases the statewide figure (birds/100 km) for each raptor species. West Tennessee clearly remains *terra incognita* so far as our understanding of raptor populations is concerned. On the more positive side, the statewide coverage achieved in 1986-87 was sufficient to produce the data needed to compare population changes of common raptors from month to month.

The level of coverage achieved in 1986-87 was also probably sufficient to compare the abundance of the common raptors and the Loggerhead Shrike in the middle and eastern divisions of the state. For the less common species, however, current levels of coverage are clearly inadequate to generate the data needed to compare abundance from region to region, from month to month, and probably from year to year. Were a larger number of surveys to be conducted, better understanding of these raptors would probably result. Exactly how much greater the coverage would need to be in order to obtain useful data about the accipters, for example, is not clear. It may be that such coverage is not realistically possible, given the current numbers of observers in the state and their level of interest in cooperative research regarding raptors; other means of obtaining these data may need to be sought.

The results of the first year of the WRRS indicate that continuation of this project, if possible with coverage of a greater number of the state's counties, especially in West Tennessee, is productive and feasible. It was particularly worthwhile in terms of the information generated about the more common birds of prey in Tennessee. With expanded coverage, the WRRS may provide useful data about the less common species.

Acknowledgments — I am especially grateful to Paul J. Tsai, Statistical Analyst, Computer Center, Tennessee Technological University, for assistance in conducting the statistical analysis cited above. To Charles P. Nicholson and an anonymous reviewer I extend thanks for pointing out inconsistencies and errors in an early version of this article. I am, finally, extremely grateful to all those who conducted a WRRS during the winter of 1986-87. Contributors are listed below by the region in which they worked, with those who worked 5 or more surveys noted by an asterisk (*).

West Tennessee: Carolyn Bullock; Helen Dinkelspiel; Sue Ferguson; James Waldron; Martha Waldron.

Middle Tennessee: Kenneth Anderson; Frank Bills; Donald Blunk; Gayle Boone; Sharon Bostick; Peggy Clifford; Dot Crawford; Paul Crawford; Joe Duncan; Patricia Fathera; Paul Hamel; David Hassler; Robbie Hassler; Annie Heilman; Frank Hernandez; Marguerite Hernandez; Mildred Lassiter; Bedford Lochridge; Melville McMillan; Ruth McMillan (*); Aimon Niklasson; Arvid Niklasson; Kay Norris; Elizabeth O'Connor (*); Phyllis Parks; James Peters; Caryl Ploger; Allen Pressnell; Dianne Pressnell; John Robinson; Damien Simbeck; Richard Simmers; Christopher Sloan; Mert Sloan; Margie Smith; Barbara Stedman; Stephen Stedman; John Stokes; Melissa Tucker; David Vogt; Joseph Wahl; Ellen Walker; Terry Witt.

East Tennessee: Laurie Armstrong; Mark Armstrong; Phine Britton; Brian Cross; Drew Cowherd; Kenton Dickerson; Penni Dickerson; Glen Eller; Barry Fleming; David Hassler; Robbie Hassler; Audrey Hoff; Ronald Hoff; Richard Knight; Mildred Lassiter; Linda Mascuch; Paul Mascuch; Daniel Nieves; Terry Nieves; David Patton (*); Dottie Patton; Thomas Patton (*); JoAnne Routledge; Larry Routledge; Richard Simmers.

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APPENDIX

COUNTIES WITH WINTER ROADSIDE RAPTOR SURVEYS, 1986-87

WEST TENNESSEE: Fayette and Hardeman.

MIDDLE TENNESSEE: Bedford, Cannon, Coffee, Davidson, Franklin, Hickman, Houston, Humphreys, Jackson, Lawrence, Marshall, Montgo-

mery, Overton, Pickett, Putnam, Rutherford, Smith, Stewart, Sumner, Trousdale, Williamson and Wilson.

EAST TENNESSEE: Bledsoe, Cocke, Cumberland, Fentress, Greene, Knox, Loudon, McMinn, Marion, Sequatchie, Union and Washington.

(continued from page 4)

books, is entitled "Arkansas birds in prehistory." It describes bird remains and bird effigies excavated from archaeological sites throughout the state. The last introductory chapter is a brief one on bird finding.

The bulk of the book is the 366 species accounts. These open with a short paragraph giving the bird's relative abundance, seasonal and geographic occurence, and habitat preferences. Following this are details of the species' spring migration, breeding season, fall migration and winter status. Much of the detail in these sections is drawn from the "bird file" maintained by the Arkansas Audubon Society since its founding in 1955. At the end of 1985, this file had approximately 40,000 records. Earlier observations, such as those of Ben Coffey, whose Arkansas records go back to 1929, were incorporated where available. The existence of this book shows the value of such a well-curated central repository of bird records. The species accounts also include results from organized studies such as Christmas Bird Counts and the Breeding Bird Survey. The ranges of many species of less than statewide distribution are mapped, as are banding recoveries of species banded in large numbers. Although the "bird file" includes records from throughout the state, no systematic statewide survey work was done. This has resulted in otherwise unexplained gaps in the distribution maps of several species, such as that of the Rufous-sided Towhee (p. 329).

There is much of interest to Tennesseans in this book. The Western Meadowlark is described as an "uncommon but regular migrant and winter resident in small numbers" (p. 353) throughout the state, but the latest spring record is 21 May, and there are no summer records. The Greater Roadrunner has spread from the first report in southwest Arkansas in 1936 to essentially statewide, except that it does not occur in the Mississippi River bottoms. This habitat barrier has apparently prevented its spread eastward into Tennessee. Burrowing Owls have been reported from the counties bordering Tennessee, but, again, not in Tennessee. Song Sparrows have not nested in the state in over 50 years.

My criticisms of this book are few and minor. The artwork by Plank is very good; I am less enthusiastic about Burch's work. I wish the authors had presented some criticism or qualification of some unusual, older records, such as the reported nesting of Savannah Sparrows at Fayetteville. The binding seems weak, although this is no fault of the authors. Nevertheless, I highly recommend this compilation of the birds of our neighboring state. — CHARLES P. NICHOLSON.

MINUTES OF THE 1987 FALL MEETING AND SYMPOSIUM

The Tennessee Ornithological Society held its 1987 Fall Meeting and Symposium at Lawrenceburg, Tennessee, on 13-15 November. Events included a Friday evening reception and program, a Board of Directors meeting and symposium on Saturday, and field trips on Saturday and Sunday.

BOARD OF DIRECTORS MEETING

President Stephen J. Stedman called the meeting to order at 4:57 P.M. on 14 November in the Lawrence County High School auditorium. It was determined that a quorum was present. Copies of the minutes of the 1-3 May 1987 meeting of the Board of Directors held in Memphis were distributed and approved as printed.

REPORTS OF OFFICERS AND DIRECTORS

The VICE PRESIDENT for East Tennessee had no report, and the VICE PRESIDENT for West Tennessee was absent and had no report. VICE PRESIDENT for Middle Tennessee John Ellis reported that preparations are underway for next spring's TOS meeting in Nashville on 29 April - 1 May 1988. He recommended that lodging be sought in the Franklin area due to traffic problems in Brentwood at dusk. Current plans are to hold the TOS Board of Directors meeting and the Saturday banquet at the Tennessee Baptist Convention Center. He then announced that additional details would be forthcoming.

The DIRECTOR-AT-LARGE for Middle Tennessee had no report. The DIRECTOR-AT-LARGE for East Tennessee had no report but asked that members at large in Middle and West Tennessee send information on rare bird sightings to members in East Tennessee. DIRECTOR-AT-LARGE for West Tennessee Donna Ward submitted a report and told of eagle and Osprey nesting attempts at the Duck River Unit of the Tennessee National Wildlife Refuge in 1987.

SECRETARY John Robinson reported that he had received good cooperation from all of the Chapter Presidents, and he stated that forms on which Chapters could update his list of officers and directors would be mailed out shortly.

TREASURER George R. Payne, Jr., reported that from 1 May to 12 November 1987 the Society had Income of $2,395.22, estimated Liabilities of $4,550.00 and Capital Reserve of $37,758.37. A Membership Report showing 901 memberships was also submitted.

CURATOR James Tanner was absent, and his report was read by the Secretary. It was reported that $391.00 was received from sale of back copies of *The Migrant*.

EDITOR Charles Nicholson reported that the June 1987 issue of *The Migrant* is just back from the printer and will be mailed in the next week. He also reported on the status of the September and December 1987 issues. He requested that future manuscripts be sent to Fred Alsop who will be assuming editorship with the June 1988 issue. President Stedman then urged that

manuscripts be sent to the editor in a timely manner to ensure that the publication and mailing of *The Migrant* meet scheduled deadlines.

REPORTS OF STANDING COMMITTEES

President Stedman announced the new members of the NOMINATING COMMITTEE: Chairperson Ronald Hoff (East Tennessee), Damien Simbeck (Middle Tennessee) and James Ferguson (West Tennessee). He asked that suggestions for President-elect be sent to these members and stated that a person to fill that position must be elected at the May 1988 meeting.

FINANCE Committee Chairperson Richard Taylor reported that the value of the MIT fund increased 48% over the last year up until 19 October 1987, when this increase was reduced to about 24%. However, he stated that the Society is still ahead compared to figures from one year ago and that the fund had done better than most funds have in recent weeks.

REPORTS OF SPECIAL COMMITTEES/TASKS

CONSERVATION/EDUCATION Chairperson Ken Dubke made a motion that the TOS cooperate with TWRA in a Common Barn-Owl nesting project. The motion was seconded and passed. He then reported on the progress made on this project to date, including the printing of 5,000 flyers by TWRA which he suggested be distributed locally by the TOS Chapters and members. Paul Hamel then requested that information resulting from the barn-owl project be directed to the appropriate regional coordinators of the Atlas project.

Next, Jeff Wilson distributed a flyer summarizing House Bill 417, Shelby Farms Forest Natural Area, and urged all members to write and ask their representatives to support this bill to stop the proposed extension of Kirby Parkway through the Shelby Farms Forest area.

CERTIFICATION Chairperson Charles Nicholson reported on the activities of the Certification Committee and said that an article is being prepared which will serve as an addendum to the official state list. He urged that details on rare/unusual sightings should continue to be submitted. Martha Waldron then made a motion to change Section II of the TOS Committee Resolution as presented in Volume 4, No. 1, of *The Tennessee Warbler* and accepted at the Board of Directors meeting in May 1982 to read as follows: "In the absence of evidence fitting one of the above categories, provisional species will be those for which there are one or two sight records accepted by the Committee." This motion was seconded and passed.

BREEDING BIRD ATLAS Chairperson Paul Hamel reported on the activities of the Atlas Committee and thanked all regional coordinators for their work throughout the year. He announced that he is stepping down as Atlas Coordinator and that Charles Nicholson would be taking his place. He also stated that Bob Hatcher would be taking over fund-raising aspects of the project. He then made a motion that remaining funds from this past year be carried over to next year with an additional $250.00 to be allocated in 1988. The motion was seconded and passed. The need to reach additional potential atlas workers in 1988 was stressed, after which President Stedman called for applause for Paul Hamel's work with the project.

President Stedman called for a volunteer to chair the PATCHES AND DECALS COMMITTEE, but none was forthcoming.

The *Tennessee Warbler* EDITOR was absent and there was no report.

MEMBERSHIP DRIVE Chairperson Audrey Hoff made a motion to allocate $400.00 to contact potential members by mail using 500 contact letters ($51.00), 500 TOS logo-type envelopes ($37.00), 500 mail-back envelopes ($36.00), 2000 TOS flyers ($236.00) and postage ($40.00). The motion was seconded and discussion followed. The question was then called, and the motion passed as originally presented by Audrey Hoff. She then requested that any ideas on the Membership Drive be relayed to her.

PUBLICITY Chairperson Lil Dubke thanked all those who attended the Membership Seminar earlier in the day and stated that the seminar resulted in the receipt of 100 suggestions from the 22+ members who were in attendance. She and Ed Crouch then gave examples of how publicity of TOS activities can result in an increase of a Chapter's membership or of a community's awareness of the TOS.

OLD BUSINESS

George R. Mayfield, Jr., reported that he had recently talked with Bill Perdue of the Monsanto Company and said that #9 Pond had been drained and that Least Bitterns had been observed there last May and June. He said another pond, Girl Scout Pond, had been drained. Plans are continuing to save Rail Pond and Ponds # 11, 12 and 8. No decision on the fate of the #15 Pond had yet been made; a meeting to discuss this issue is scheduled in Columbia next month.

NEW BUSINESS

Ken Dubke advised that in view of the Atlas project and the Membership Drive, the Society needs to look ahead to a possible dues increase. He then made a motion that in 1989 the TOS increase all dues $4.00 in all categories of membership except Life memberships. The motion was seconded, and the question was called but was immediately withdrawn. A lengthy discussion then followed. David Chaffin then made a motion to table Ken Dubke's original motion until the May meeting so that all chapters could be given time to discuss it. The motion was seconded and a discussion followed. Ken Dubke then urged the Society not to wait until 1989 before deciding on this issue. The question was called and David Chaffin's motion was then passed. David Vogt then motioned that information regarding the need for a raise of dues be made available to the directors and presidents of all Chapters prior to May. Paul Hamel made a friendly amendment that this information be made available prior to 1 February 1988. Donna Smith then made a friendly amendment that this information include costs/member for newsletter and other publications. The question was called and David Vogt's motion as amended was passed. President Stedman then asked that George Payne and Richard Taylor prepare the specified information and mail it to the 13 Chapters and members-at-large by 1 February 1988. George Payne suggested that the Committee examine this issue to determine the optimum amount for a dues increase.

Next, David Chaffin stated that he and several other members of the Chattanooga Chapter had come up with a proposal for a Rare Bird Alert system for the state of Tennessee and solicited comments regarding whether this is a service which the TOS should provide. A discussion took place after which Jim Ferguson motioned that a committee be formed to

discuss the RBA and bring back a list of alternatives to be discussed at the next meeting. The motion was seconded and passed, and President Stedman appointed a Rare Bird Alert Special Committee consisting of David Chaffin (Chairperson), Benton Basham, John Robinson, Lil Dubke, Dollyann Daily and Rick Knight.

Barbara Stedman then reported that John Sherman, Director of the Tennessee Environmental Council (TEC), had invited the TOS to rejoin the Council, and she made a motion for the TOS to rejoin the TEC at a membership cost of $50.00 and to appoint someone to represent the TOS at the TEC's meetings. The motion was seconded and passed, and President Stedman appointed Ken Dubke as the TOS representative to TEC.

ANNOUNCEMENTS/APPOINTMENTS

Paul Hamel announced next year's Breeding Bird Forays will be conducted in Hancock and Hawkins Counties (Region 9) and in McNairy and Chester Counties (Region 2). The forays will be coordinated by the appropriate Regional Coordinator. Dates and other information concerning the forays will be forthcoming.

An attempt to appoint a chairperson for Patches and Decals failed, following which the meeting adjourned. However, immediately after adjournment, Susan Watson volunteered to serve as Chairperson of that committee. The appointment of David Snyder as Director of Fall Symposia for 1988 and 1989 was announced. It was also announced later in the evening that the new Member of the Certification Committee will be Martha G. Waldron (1987-1990) and the new Alternate will be Dianne Bean (1987-1990).

JOHN C. ROBINSON, SECRETARY.

SYMPOSIUM PROCEEDINGS

The paper sessions of the 1987 Fall Symposium were arranged by Stephen J. Stedman. Abstracts of the papers presented at the Symposium are offered below.

SOME ROAN MOUNTAIN BREEDING BIRDS, by Fred J. Alsop III, Department of Biological Sciences, East Tennessee State University. Field work was conducted over a 50-day period (23 May - 14 July 1987) on Roan Mountain in Upper East Tennessee for the purpose of locating the nests of breeding birds and to document them with photographs. Nests of Golden-winged Warblers, Rose-breasted Grosbeaks, Least Flycatchers, and Golden-crowned Kinglets were photographed, and some data on nidification were recorded. The kinglet nests are believed to be the second and third verified for the species in Tennessee and the first to be photographed.

BIRD MIGRATION AND CONSERVATION BIOLOGY, by Sidney A Gauthreaux, Department of Biological Sciences, Clemson University. No abstract submitted.

1987 ATLAS FORAYS TO BLEDSOE AND HENRY COUNTIES: COMMON THREADS, by Paul B. Hamel, Tennessee Department of Conservation. Two Breeding Bird Forays were held in 1987, in an attempt to involve more members of the Society in this exciting and worthwhile pursuit. As in recent years, the Forays were conducted using the methodology of the Breeding Bird Atlas project. On Memorial Day weekend, 23-26 May, 27 birders worked in parts of 27 atlas blocks in 25 quadrangles centered in

Henry County. A total of 108 species was observed, of which 66 were recorded as positive breeders. On Father's Day weekend, 19-21 June, 18 participants worked in 24 blocks on 11 quads centered in Bledsoe County. They recorded 60 of 91 species as positive breeders. Comparison of these results with those of the forays conducted in 1985 and 1986 indicates an improvement in the skills of atlasers. Thanks go to all of the observers, and to Chuck Nicholson and Bob Ford for assistance preparing the manuscript.

TENNESSEE'S WILDLIFE OBSERVATION AREA PROGRAM, by Robert M. Hatcher, Tennessee Wildlife Resources Agency. The public generally has inadequate knowledge about (1) good places to observe quality wildlife populations, and (2) habitat requirements for such populations; wildlife observation areas are designed to help resolve both problems. Of 39 sites designated in Tennessee between 1981 and 1987, two-thirds are in cooperation with other state agencies and some federal agencies. Cooperative plans for each area are site-specific, but the owner-cooperator is normally the lead agency for enhancing wildlife observation opportunities and interpretive programs. Good opportunities are provided for improving enjoyment and public support of all wildlife resources at a minimal cost.

A major goal of Tennessee's Nongame Wildlife Program is to provide the public with maximum opportunities for enjoyment of wildlife. Another goal is to better educate the public about habitat requirements of wildlife. Wildlife observation areas (WOA's) are designed to accomplish both these objectives. "Hot spots" for quality wildlife observation are identified for public use, while the ecological values that make such quality populations possible are interpreted.

Surveys conducted by the U.S. Fish and Wildlife Service indicate substantial interest in watching and photographing wildlife, with over 2.8 million Tennesseeans (62%) participating in such activities in 1980.

PRELIMINARY 1987 TENNESSEE BREEDING BIRD ATLAS RESULTS, by Charles P. Nicholson, Tennessee Valley Authority. During the 1987 field season, the second of the atlas project, approximately 7000 new breeding records were collected, and 2000 records from 1986 were updated to higher breeding status. The total number of breeding records is about 22,500, 24% of which are in the positive category. About 700 blocks have received some atlas work, and 50 or more species have been recorded in 210 blocks. Sixty or more species have been recorded in 130 blocks. Four species were added to the atlas species list in 1987, bringing it up to 163 species. Fourteen species were added to the atlas list of positive breeders during 1987. The Turkey Vulture has not yet been recorded as a positive breeder. During the first 2 years of the project, Tennessee atlasers worked 6500 hours during parts of 3000 days. Maps were displayed showing the number of species per block, the percentage of positive records in blocks with at least 50 species, the breeding status of the Red-eyed Vireo and Indigo Bunting, and mini-route results for the Indigo Bunting.

BACHMAN'S SPARROW: FINDING A RARE BIRD IN TENNESSEE, by Damien J. Simbeck, Buffalo River Chapter, TOS. Bachman's Sparrow is a secretive, ground-dwelling sparrow of the southeastern United States. It is currently listed as endangered in Tennessee by TWRA. Bachman's Sparrows inhabit fields with low tree and shrub density and dense, but patchy, ground cover. In Tennessee, they can best be found in clear-cut pine planta-

tions. The males sing most frequently at dawn and dusk, and will usually respond to a tape. Bachman's should be looked for throughout the state from March through October. This species is probably not as rare in Tennessee as it is currently thought to be.

ATLASING AND THE INDIVIDUAL OBSERVER, by Barbara H. Stedman, Nashville Chapter, TOS. The experiences from the 1987 Atlas season of one observer were summarized with emphasis on the human factor in atlasing. Blocks covered included those in six of the nine atlas regions in Tennessee. Thirteen blocks were completely worked, and Miscellaneous Observations Forms were submitted for many additional blocks. Eight of the 13 completed blocks were worked with other observers, including 2 on Atlas Forays. Several of the completed blocks had been started in 1986. The cumulative species total for all areas worked was 127, of which 95 were recorded as positive breeders, 15 as probable breeders, and 17 as possible breeders. Four blocks were covered by backpacking in Great Smoky Mountains National Park.

The individual observer is not only the eyes and ears but also the heart of the Tennessee Breeding Bird Atlas Project. Each TOS member is needed in the project over the next 3 years, which will determine the project's success.

THE RED-COCKADED WOODPECKER AND ITS MANAGEMENT IN THE CHEROKEE NATIONAL FOREST, by J. Craig Watson, Tennessee Wildlife Resources Agency. Three Red-cockaded Woodpeckers *(Picoides borealis)* were observed on the Indian Creek Peninsula of Parksville Lake, Cherokee National Forest, Polk County, on 3 August 1986. Subsequent field surveys located an active colony of these woodpeckers with 3 active cavity trees in the Indian Creek area, as well as 21 inactive cavity trees. The Tennessee Wildlife Resources Agency and the U.S. Forest Service have implemented a habitat management plan in the active colony area and have successfully adopted an innovative technique of placing stainless steel "restrictors" over the entrance holes of active cavities to reduce competition from other cavity nesting species. Future surveys and habitat management will continue in the Cherokee National Forest.

ROUND TABLE NOTES

FIRST RECORD OF SNOWY OWL IN STEWART COUNTY, TENNESSEE — While crossing the bridge over the Cumberland River at Dover, Stewart County, Tennessee, at 0726 on 5 January 1987, I saw a large, pale-white bird flying over a large cornfield within the Barkley Wildlife Management Area (WMA) just northwest of the bridge. The deep, slow and deliberate wing beats of the bird at first suggested a large larid, but as I drew closer the bird's flight and body shape became more reminiscent of a raptor, causing me to speculate that it might be an albino hawk. The bird and I crossed paths as I neared the end of the bridge, however, and it was at this time that I noticed the distinctive, cigar-shaped body typical of an owl.

Suspicious that I had just observed a Snowy Owl *(Nyctea scandiaca),* I immediately recrossed the bridge and found the bird at 0728 perched atop the new westbound lane of the bridge which was currently under construction. From a distance of about 9 m I noted the field marks which follow. The base color of the bird's entire plumage was white. On this base color, dark, horizontal barring/spotting was evident in the tail, the back, the crown (not including the forehead which was all white) and the underparts (not including the throat area). The dark, horizontal barring on the underparts, which reminded me somewhat of an adult male Peregrine Falcon's *(Falco peregrinus)* underparts, was conspicuously heavy and would therefore imply that this individual was an immature bird. Dark spotting was also present on the wings.

The bill was short, hooked and dark. The iris color was bright yellow. The facial disk, upper chest and throat areas were predominantly white. No "ear tufts" were present. The feathering on the legs, which extended down to the talons, was also predominantly white. When perched, the owl sat at a forward angle (not vertical as in most hawks) with its stomach resting on its toes. The bird took to the air at 0730 and began circling over the river, heading in a general southeastward direction.

Many Nashville area observers attempted to find the Snowy Owl during the next 2 days without success. However, on 20 January, I was contacted by a refuge volunteer who informed me that a waterfowl hunter had observed a "large, white bird" between 2 hunting blinds within the Barkley WMA over a period of 2 weeks ending 18 January. I alerted several Nashville birders and shortly after sunrise on 24 January Jerry Drewry, Maxey Irwin and Kinian Cosner relocated the owl. The bird disappeared shortly thereafter, causing dismay to the growing number of birders who were arriving in response to the report of the owl's rediscovery. Donald Blunk, a local birder who is completely familiar with the terrain of the Barkley WMA, arrived early that afternoon and within an hour was able to locate the owl at its roosting site: a large brush pile in the middle of one of the management area's larger impoundments.

The owl spent the great majority of its time at this roost or hunting over the surrounding impoundments and corn fields. It was frequently active during daylight hours and was seen almost daily from 24 January to 6 February by well over 125 birders, sportsmen and outdoor enthusiasts. I know of no sightings after 6 February. Mark Gudlin, a wildlife biologist with the Tennessee Wildlife Resources Agency, and I took a boat to the owl's

roost on 13 February and collected 3 sets of American Coot *(Fulica americana)* wings and 2 owl pellets the dimensions of which are as follows: 56x34x26 mm and 80x32x26 mm. David Vogt collected an additional 4 pellets on 24 January. The 13 February pellets were analyzed by Dr. David H. Snyder, Professor of Biology at Austin Peay State University. These 2 pellets were judged to represent the remains of a Pied-billed Grebe *(Podylimbus podiceps).*

Pellets found on 24 January were analyzed by Paul W. Parmalee, Professor and Director of the McClung Museum at the University of Tennessee at Knoxville. Remains of an American Coot were divided between 3 of the pellets; skeletal remains of a prairie vole *(Microtus ochrogaster)* were divided between 2 of the pellets; and a section of furculum from a duck the size and proportion of a Mallard *(Anas platyrhynchos)* was found in one of the pellets. These findings are supported by Wallace Todd's observation in late January of the Snowy Owl catching and consuming an American Coot.

The Snowy Owl is a very infrequent visitor to Tennessee with only 8 substantiated sightings through January 1961 (Bierly, M.L. 1980. *Bird Finding in Tennessee.* M.L. Bierly, Nashville). The sighting described by this note represents the ninth state record and the first Snowy Owl seen in the state in 26 years. The species has previously been recorded at Reelfoot Lake, Nashville, Johnson City, near Paris (2 sightings), near Paris Landing at Kentucky Lake, along the White/Cumberland County line and in Sullivan County. There are no previous records for Stewart County. It should be noted that Powell (*Amer. Birds* 41(2):285) summarized the 1986-87 winter season in Minnesota, Wisconsin and Michigan as "the best Snowy Owl winter in at least 5 years." I am indebted to David H. Snyder, Paul W. Parmalee, Mark Gudlin and David F. Vogt for the assistance and contributions which they so graciously provided.

JOHN C. ROBINSON, P.O. Box 215, Dover, Tennessee 37058. Accepted 31 October 1987.

CATTLE EGRETS NEST IN SUMNER COUNTY — Nests of Cattle Egrets *(Bubulcus ibis)* in Tennessee have been infrequently reported, particularly east of the Mississippi River floodplain. Thus, the nesting of this species in a colony of Black-crowned Night-Herons *(Nycticorax nycticorax)* in Sumner County during 1987 warrants description.

On 3 July 1987 at 1455 (CDT) I watched with Barbara H. Stedman, Dot T. Crawford, and J. Paul Crawford as a Cattle Egret flew into a Black-crowned Night-Heron colony located on a small island in Old Hickory Lake 250 m offshore from the coal loading docks of the Gallatin Steam Plant; J.P. Crawford saw another Cattle Egret enter the rookery shortly thereafter. Both birds returned to view 2 minutes later; one flew off to the north, while the other perched in view and preened for 2-3 minutes before also flying northward. Since this bird displayed the buffy patches on back and breast characteristic of breeding adults, we surmised that these birds were nesting in the colony and decided to return with a boat to search the island for a nest.

On 6 July 1987 at 1345 J.P. Crawford and I searched the dense, deciduous trees on the island for a Cattle Egret nest. We saw an adult Cattle Egret (Figure 1) perched in the area where an adult had perched on 3 July 1987. A

few minutes later we discoverd a nest containing 2 young egrets (Figure 2) 20-25 cm in length. This nest was less than 8 m from the perch used by the adult Cattle Egret and was built at a height of 5-6 m. The young were entirely covered with white down and feathers, their mandibles were gray with a pale yellow tip, and their irises were very pale yellow, all characteristics conforming to descriptions of nestling Cattle Egrets (Palmer 1962), as well as to published photographs of them (Heminway 1987). While we observed, 2 adult Cattle Egrets moved restlessly about in the vicinity of the nest and young but never came closer than 3 m to the nest.

Although this rookery was under observation during most of June and July, 1987, no white herons/egrets except Cattle Egrets were noted in its vicinity. Thus, all the evidence suggests that the nest and young which we observed were those of *B. ibis*. As such, this observation constitutes the first breeding record of Cattle Egret in Sumner County and in the Nashville Area (Parmer 1985). It is also the first nest in the Highland Rim and Basin Region of Tennessee for which specific data have been published, though the species may have nested in or near that region at the Tennessee National Wildlife Refuge in the 1960's or early 1970's (Pitts 1973). Other nesting records of this species east of the Mississippi River floodplain include 4 nests at a Black-crowned Night-Heron colony on Cherokee Lake, Grainger County, in 1975 (Pitts 1977) and a nest with 2 young in the same colony 1-2 July 1976 (Williams 1977). While there are no other reported nests of this species in Tennessee more that 40 km east of the Mississippi River, Kentucky's first Cattle Egret nest was located just to the north of Tennessee on an island in Kentucky Lake, Trigg County, during the summer of 1981 (Peterjohn 1981). Like the Sumner County and Grainger County nests, it was situated in a Black-crowned Night-Heron colony.

I thank Charles P. Nicholson for drawing my attention to several sources cited in this note; I also thank J. Paul Crawford for providing black-and-white prints of the adult Cattle Egret, its nest, and its young.

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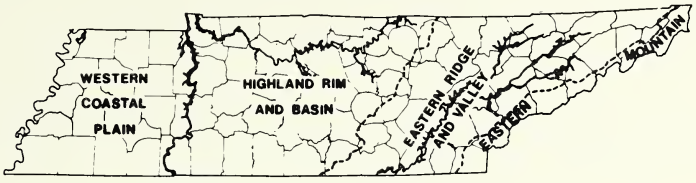
STEPHEN J. STEDMAN, Department of English, Tennessee Technological University, P.O. Box 5053, Cookeville, TN 38505. Accepted 10 January 1988.

THE SEASON



FALL MIGRATION: 1 AUGUST — 30 NOVEMBER 1987

Precipitation was below average throughout the state, with a rainfall deficit for the 4 month period of from about 4 inches in the east to near 7 inches in middle Tennessee. .Temperatures were generally mild. Unlike recent fall seasons, regular cold fronts, with associated waves of migrants, were noted in the Eastern Ridge and Valley Region. Although these frontal systems undoubtedly passed across the whole state, the west Tennessee compiler noted that migration waves were barely noticeable.

There were, however, many notable rarities reported from across the state. A sampling of these includes the following, in taxonomic order: Anhinga at Chattanooga, first east Tennessee record; Northern Gannet in Robertson County, first state record; Marbled Godwit at Paris Landing; Pomarine Jaeger at Paris Landing; and a Vermilion Flycatcher at Austin Springs, second east Tennessee Record. Many other unusual, but less rare, species were also reported.

A few Red-breasted Nuthatches were reported from outside of the Blue Ridge Mountains. Pine Siskins invaded the state in October and were widespread by the end of the period. Most of the reports of Evening Grosbeaks were of birds passing through Middle Tennessee. — Charles P. Nicholson.

Abbreviations used in the following reports include the following: ad - adult; b - banded; EOP - end of period; ers - earliest report of season; imm - immature; lrs - latest report of season; max - maximum one day count in one county; m.ob. - many observers.

WESTERN COASTAL PLAIN REGION — The weather this season was very dry with mild to warm temperatures. Migration waves were barely noticeable. Field work did not show passerines in any great numbers. Shorebird numbers were triple those of 1986 for most species. The number of field trips for shorebirds were the same in both years, although this year's field work was conducted twice weekly. The Tennessee River near Paris Landing State Park hosted scoters, a godwit, phalaropes and a jaeger.

Grebe — Merlin: Horned Grebe: 21 Nov (46) PLS (JCR); 30 Nov (80+) PLS, BRF (DWB). American White Pelican: 8 Oct - 4 Nov (75) Horseshoe Lake, Arkansas (MTOS). Least Bittern: 21 Aug (1) Reelfoot Lake, Obion Co. (SJS, BHS, JCR). Great Blue Heron: 22 Aug (262) Lake and Obion Cos. (JCR). Great Egret: 29 Aug (112) I13 (JCR). Snowy Egret: 7 Aug (29) (JCR), 29 Aug (22) (JCR, DWB), 31 Aug (65) (WGC), all at I13. Greater White-fronted Goose: 30 Nov (1) BRF (DWB). Green-winged Teal: 29 Oct (239) BRF (JCR); 17 Nov (250+) Big Eagle area, HNC (DWB). Ring-necked Duck: 20 Sep (1) BRF

(JCR); 30 Nov (1100) BRF (DWB). Greater Scaup: 30 Nov (1 male) PLS (DWB). BLACK SCOTER: 21-26 Oct (2) PLS (JCR, DWB, CGD). Surf Scoter: 22-29 Oct (1-7) PLS (JCR, DWB, CGD). Ruddy Duck: 26 Sep (2 males) Robco Lake, SBC (Ben B. Coffey, Jr., Lula C. Coffey). Mississippi Kite: 22 Aug (**197**+) I13 (BHS). Sharp-shinned Hawk: 25 Oct (2) Shelby Forest State Park, SBC (MTOS); 22 Nov (1) east SBC (CHB, MGW). Merlin: 20, 29 Sep (1) ESL (CHB, DPB, VBR, MGW); 11, 24 Oct (1) PEF (DPB, Bob and Ginger Ilardi, VBR, MGW); 1 Nov (1) north SBC (Robert T. Casey).

Crane — Tern: SANDHILL CRANE: 21 Sep (6) MEM (David Pattar). Semipalmated Plover: **21-22 Nov** (1) BRF (JCR), latest west TN date. Piping Plover: 21-28 Aug (1-2) I13 (SJS, JCR, BHS, WGC); 24 Aug (1) PAP (SJS, JCR, BHS); 26 Aug (1) PAP (AHH); 3 Sep (1) Miss. River (JRW, MGW); 12 Sep (1) PAP (WAS). Black-bellied Plover: 30 Nov (1) Big Eagle area, HNC (DWB). Lesser Yellowlegs: 11-31 Aug (54-22), 20-29 Sep (75-153) ESL (CHB, DPB, VBR, MGW). **MARBLED GODWIT:** 15-17 Aug (1) PLS (DRJ, JCR, CGD, AHH, Nita R. Heilman, DWB). Ruddy Turnstone: 11 Aug (5) ESL (CHB, DPB, VBR, MGW); 18 Aug, 20 Sep (1) PLS (JCR); 29 Aug (1) PAP (JCR); 13 Sep (1) I13 (WGC). Sanderling: 18 Aug (3), 13 Sep (4) PLS (JCR); 22 Aug (1) I13 (JCR, SJS); 26 Aug (1), 7 Sep (6), 12 Sep (1) PAP (AHH, JCR, WAS). Western Sandpiper: 21, 22 Aug (9, 50) I13 (JCR, CGD); 3-29 Sep (up to 25) ESL (Mac & Susan McWhirter, MGW, VBR, James E. Waldron, CHB, DPB, DAD). Baird's Sandpiper: 23, 29 Aug (1, 8) I13 (JCR, SJS); 24 Aug (2) PAP (JCR, SJS); 29 Aug, 7 Sep (1-2) PLS (JCR, SJS); 31 Aug, 12 Sep (1) ESL (VBR, MGW, MTOS). Dunlin: 29 Oct (24), 8 Nov (1) ESL (VBR, MGW); 29 Oct (63) Miss. River (JRW); 29 Oct (34) BSU (JCR); 7 Nov (4) BRF (JCR); 30 Nov (1) BRF (DWB). Buff-breasted Sandpiper: 7/22 Aug (1) I13 (JCR/BHS); 22, 29 Sep (1) ESL (CHB, DAD, MGW); 17 Oct (1) ESL (DAD, JRW). Short-billed Dowitcher: 21, 22 Aug (5, 4) I13 (CGD, JCR, SJS); 23 Aug (2) ESL (CHB, DAD, VBR, MGW); 7 Sep (4) BSU (JCR); 29 Sep (7) ESL (CHB, MGW). Common Snipe: 17, 24, 29 Oct (60, 50, 44), 8 Nov (38) ESL (CHB, DAD, VBR, JRW, MGW). RED-NECKED PHALAROPE: 23 Aug (1) I13 (JCR). RED PHALAROPE: 25 Oct (1) PLS (DWB). POMARINE JAEGER: 15 Aug - 4 Sep (1) PLS (JCR, CGD, MLB *et al.*). Laughing Gull: 21-23 Aug (1) I13 (SJS, JCR, BHS). Franklin's Gull: 11, 29 Oct (1) PLS (JCR). Caspian Tern: 10 Aug - 23 Sep (2-9) LKC, HNC, SBC (WGC, JCR, SJS, BHS, CHB). Common Tern: 29 Aug (1) PAP (JCR, CGD, DWB); 12 Oct (2) PAP (JCR). Forster's Tern: 7 Nov (6) BRF (JCR).

Dove — Siskin: COMMON GROUND-DOVE: 17-22 Oct (1) ESL (JRW, DAD). Black-billed Cuckoo: 21/23 Aug (1) I13 (BHS); 6 Sep (2) ESL (Richard & Elzie Heintz); 13 Sep (1) ESL (MTOS). Fish Crow: 22 Sep (35) Audubon Park, SBC (Rob Peeples); 4 Oct (27) Overton Park, MEM (MTOS). Olive-sided Flycatcher: 24 Aug (1) BSU (SJS, JCR). VERMILION FLY-CATCHER: 20 Sep (1) I13 (JRW, DAD). WESTERN KINGBIRD: 15-18 Sep (1) MEM (JRW *et al.*). Yellow-rumped Warbler: 27 Sep (1) PEF (Marylou Kramer, VBR, MGW). BLACK-HEADED-GROSBEAK: 6 Sep (1) north LKC (DAD). Blue Grosbeak: 12 Oct (1) BRF (JCR), late. Sharp-tailed Sparrow: 4 Oct (3) BRF (JCR, DWB). Lapland Longspur: 30 Nov (26) BRF (DWB), first for season. YELLOW-HEADED BLACKBIRD: 24 Oct (1) ESL (Buddy Beaver, MAS); Brewer's Blackbird: 22 Nov (2m, 3f) PEF (CHB, MGW). Pine Siskin: 4 Oct (1) BRF (JCR), ers.

Locations: BRF — Britton Ford, Tenn. Nat. Wildl. Refuge, Henry Co.; BSU — Big Sandy Unit, Tenn. Nat. Wildl. Refuge, Henry Co.; ESL — Ensley Sewage Lagoons, Shelby Co.; HNC — Henry Co.; I13 — Island 13, Lake Co.; LKC — Lake Co.; MEM — Memphis; PAP — Pace Point, Henry Co.; PEF — Shelby Co. Penal Farm; PLS — Paris Landing State Park, Henry Co.; SBC — Shelby Co.

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HIGHLAND RIM AND BASIN REGION — Below normal precipitation fell on the region. Nashville rainfall during August totaled 0.73 in. (2.67 in. deficient), while 1.95 fell in September (1.76 deficient), 0.21 in October (2.37 deficient and 4th driest ever), and 3.40 in November (0.12 deficient). Slightly more rain (8.36 in.) was measured over the four-month period in Stewart County. Temperatures varied considerably, especially in October and November, but generally fall was mild.

One extraordinary rarity occurred in the region, when a Northern Gannet was sighted just south of the Kentucky border in Robertson County by a skilled observer from Ohio. More expected rarities included a Red-throated Loon and Eared Grebes in the Nashville Area, a Eurasian Wigeon in Stewart County, a Black Scoter and a Northern Goshawk in Lawrence County, a well-seen and very cooperative Yellow Rail in Stewart County, and Sharp-tailed Sparrows in Humphreys and Stewart Counties.

By the end of the season boreal finches were widespread in small to moderate numbers, suggesting that a good winter for them was imminent. Red-breasted Nuthatches were reported locally in small numbers, but no Rough-legged Hawks had been reported by season's end.

With the publication of a series of articles on the field identification of *Empidonax* flycatchers by Whitney and Kaufmann (*Birding* 17:151-158, 1985; 17:277-287, 1985; 18:153-159, 1986; 18:315-327, 1986), sight records of migrant empids identified to species have increased; this season 3 reports of Yellow-bellied Flycatcher and 1 of Least Flycatcher were included among the data submitted. All of this season's reports were unsatisfactory, indicating that regional observers may be experiencing 1 or more of several problems: they have not read these articles; they have not read them with due care; they misinterpreted what they read; and they have not documented their findings thoroughly. Two of these reports came in without any details indicating how the identification was made; these were easy to reject. Of the remaining reports, 1 involved 3 singing (not calling) Yellow-bellied Flycatchers in early August at 1 site; it is difficult for me to believe that confusion with Eastern Wood-Pewees was not involved. The last report also involved a Yellow-bellied Flycatcher, though a nonvocal one. Half a dozen field marks of this bird were included with the report, but the documentation was inconsistent (some field marks of little value — tail-flicking — were included, while others not diagnostic of Yellow-bellied — yellow wash on underparts — were cited) and incomplete (comparison with field marks of other empids was entirely lacking — i.e., how was the "orange" lower mandible of the bird determined not to be the pinkish-yellow color of an Acadian's lower mandible?); this record, too, finally had to be rejected. Observers who expect future sight records of these species to be accepted will want to submit a TOS Certification Committee Rare Bird Reporting Form (or equivalent) giving full details about their birds. Except for birds so

documented, the only fall empid reports which will be published must be those which have traditionally been published — i.e., banded birds or those heard singing/calling by observers known to have considerable aural experience with these species and those which sound like them.

In the following report species for which a TOS Certification Committee Rare Bird Reporting Form was submitted are so indicated by an "RBRF" in the significance section of the record. Copies of this form are available from the compiler. Several records of rare species — including Say's Phoebe and Black-headed Grosbeak — are not included below because inadequate documentation for them was received. I thank John C. Robinson for a thoughtful review of a draft of this manuscript.

Loon — Grebe: RED-THROATED LOON: 8 Nov (1) OHL, SUC (*fide* SJS), first NA record. Common Loon: 31 Aug (1) OHL, SUC (SJS), ers; 28 Nov (67) PPL — county not specified (CGD), max. Pied-billed Grebe: 3 Aug (1) OHL, SUC (DTC, JPC), ers. Horned Grebe: 7 Oct (1) RDL (NTOS, Jan C. Alexander, Mary A. Zimmerman), ers. EARED GREBE: 4-9 Sep (1) RDL (John Froeschauer, CAS, JCR, DWB), 4th and earliest fall NA record (RBRF); 12, 16, 19 Oct (1) RDL (*fide* SJS), 5th NA record.

NORTHERN GANNET: 29 Nov (1 imm) just south of Kentucky border on I-65 in RBC (Michael J. Braun), first RBC, NA, regional, and state record; excellent details were submitted by a professional biologist, located at the University of Cincinnati, who is well acquainted with sulids (RBRF); details should be published.

Cormorant — Ibis: Double-crested Cormorant: 13 Aug (1) CCNWR (JCR), ers; 27 Sep (148) DRU (JCR), max. Great Egret: 18 Oct (78) DRU (JCR), max; 22 Nov (11) DRU (JCR, CGD), lrs. Snowy Egret: 1-15 Aug (up to 3) CCNWR (JCR, DWB), completes a Summer 87 record; 16/24 Aug (2/1) DRU (JCR/SJS, BHS); only reports. Little Blue Heron: 24 Sep (30) DRU (SJS, BHS), max; 5 Sep (8) CCNWR (JCR), lrs. Tricolored Heron: 1-4 Aug (1 imm) CCNWR (JCR, DWB), completes a Summer 87 record (RBRF). Cattle Egret: 13, 18, 22 Aug (2 imm) OHL, SUC (DTC, JPC), completes a Summer 87 breeding record; 3 Oct (1) DRU (BHS, DWB, JCR, SJS), lrs and only other report. Green-backed Heron: 25 Oct (1) PUC (SJS), lrs. White Ibis: 2-12 Aug (1 imm) CCNWR (DWB, JCR), completes a Summer 87 record (RBRF); 24 Aug (1 imm) DRU (SJS, BHS); only reports.

Goose — Merganser: Snow Goose: 14 Oct (3) CCNWR (JCR), ers; 24 Oct (3) N of Gainesboro on Cumberland R., JAC (JCR); 27-28 Nov (13) CCNWR (JCR), max. Green-winged Teal: 13 Aug (1) Green's Pond, SUC (SJS, BHS, DTC, JPC), ers and ties NA early fall date. American Black Duck: 9 Aug (1) CCNWR (JCR), ers. Northern Pintail: 9 Sep (3) CCNWR (BHS), ers. Gadwall: 6 Aug (1) Lake Elaine, Bedford Co. (MDH, RWL), ers. American Wigeon: 20 Sep (1) CCNWR (DWB), ers. EURASIAN WIGEON: 21-25 Nov (1 male) CCNWR (JCR, m.ob.), at least 8 previous state records, most at CCNWR (RBRF). Northern Shoveler: 20 Aug (1) CCNWR (SJS, JCR), ers. Canvasback: 28 Oct (6) FRR (CAS), ers; 23 Nov (49) FRR (Elizabeth C. O'Conner), max. Redhead: 31 Oct (4) PUC (SJS), max; only 5 other reports. Ring-necked Duck: 2 Oct (1) DUC (JCR), ers; 25 Nov (1150) CCNWR (JCR), max. Oldsquaw: 15 Nov - EOP (2) LHL (JCR, DJS, m.ob.), only report. BLACK SCOTER: 15 Nov (1) LHL (DJS, Susan Watson), about 15th state record (RBRF). Surf Scoter: 15 Nov (2) LHL (JCR, DJS, Ned Piper, m.ob.),

only report. White-winged Scoter: 20 Nov (4) WDR (James R. Peters), only report. Common Goldeneye: 11 Nov (3) PUC (SJS), ers. Bufflehead: 7 Nov (3) PUC (SJS), ers. Hooded Merganser: 23 Nov (108) PUC (SJS), max. Common Merganser: 1 Nov (3) WDR (MDH, RWL), only report. Red-breasted Merganser: 15 Nov (26/30) LHL/WDR (JCR, DJS/SJS, LHD, KHD), ers/max.

Vulture — Harrier: Black Vulture: 6 Nov (500+) GSP (DTC, JPC), max. Turkey Vulture: 15 Nov (300+) Franklin Co. (Howell J. Peebles), max. Northern Harrier: 24 Aug (1) DRU (JCR), ers; 8 other reports.

Accipiters: Sharp-shinned Hawk: 40 reports (3 Aug - EOP) with most coming from SWC and PUC, where a season-long hawk watch was conducted; 12 Sep (6) Ft. Campbell, SWC (DWB), max. Cooper's Hawk: 31 reports; 30 Sep (4) PUC (BHS), max. NORTHERN GOSHAWK: 6 Oct (1 ad.) LWC (DJS), only report (RBRF). The hawk watch in PUC was conducted on 33 days between 29 Aug and 19 Nov; about 65 hours of observation were accumulated, perhaps the first time in the history of the region that a hawk lookout was so intensively covered. Preliminary results indicate that the *Accipiter* migration at the lookout was about 50% as intensive as that occurring at similarly covered lookouts in East Tennessee; the *Buteo* migration was about 10% as intensive.

Hawk — Falcon: Broad-winged Hawk: 23 Sep (37) PUC (BHS), max. Red-tailed Hawk: 21 Nov (11) CCNWR (JCR), max; dark phase (i.e., western subspecies) birds reported as follows: 18 Oct (1) DRU (DFV, JCR); 10 Nov (1) 3 km NW Dover, SWC (DWB); 13 Nov (1) Stauffer Ponds, MUC (SJS); 21 Nov (1) CCNWR (JCR), at same site where a similarly plumaged bird was present previous 2 winters. Merlin: 24 Sep (1) PUC (BHS); 26 Sep (1) WLC (Margaret Partee, Barry Spears, *fide* RVM); 3 Oct (1) DRU (SJS, BHS, JCR, DWB); 4 Oct (1) SHB (CGD); only reports. Peregrine Falcon: 26 Sep (1) RDL (JCR); 27 Sep (1) PUC (SJS); 3-4 Oct (3) SHB (C. Kinian Cosner, Lee F. Kramer); only reports.

Turkey — Crane: Wild Turkey: reported only from PUC (RWS), SWC (DWB, DFV, JCR), and WMC (KAG, ATT, Portia McMillan). YELLOW RAIL: 4-17 Oct (1 well seen) CCNWR (JCR, C. Rowan DeBold, Christine N. DeBold, m.ob.), first SWC record (RBRF). Virginia Rail: 3 Oct (1) DRU (JCR, DWB, SJS); 24 Oct (3) GSP (JCR); only reports. Sora: 5 reports (13 Sep - 24 Oct). Sandhill Crane: 18 Oct - 22 Nov (1) DRU (JCR, m.ob.), ers; 22 Oct (65) LOV (Margaret L. Zimmerman, JDH); 5 Nov (120) LOV (JDH, RCH); 5 Nov (40) JAC (Michael Hawkins); 10 Nov (80) RUC (TJW); 19 Nov (27) PUC (BHS); only reports; the fewer than normal number of birds/reports of this species suggests that their migration this year was probably later than normal; consequently, more that the usual number of December birds/reports can be expected (see Winter 87-88 report).

Shorebirds: Lesser Golden-Plover: 28 Aug (1) CCNWR (DWB), ers; 19 Sep (1) CCNWR (JCR); only reports. Black-bellied Plover: 20 Sep (1) CCNWR (DWB), only report. Semipalmated Plover: 24 Jul (5) CCNWR (JCR), ers. PIPING PLOVER: 3-15 Aug (1) CCNWR (JCR, DWB, AHH, Nita R. Heilman), only report. American Avocet: 9 Jul (1) CCNWR (DWB, JCR), only report (RBRF). Greater Yellowlegs: 3 Jul (2) GSP (DTC, JPC, SJS), ers; 3 Nov (1) CCNWR (JCR), lrs. Lesser Yellowlegs: 19 Jun (2) CCSP (JCR), ers; 2 Sep (31) SUC (DTC, JPC, RVM, m.ob.), max; 1 Nov (1) CCSP (JCR), lrs. Solitary Sandpiper: 9 Jul (2) CCNWR (JCR), ers; 23 Oct (1) PUC (BHS), lrs.

Willet: 9 Jul (1) CCNWR (JCR, DWB); 19 Jul (1) CCNWR (JCR); only reports. Spotted Sandpiper: 14 Oct (1) CCNWR (JCR), lrs. Upland Sandpiper: 5 reports (1 Aug - 15 Sep). Sanderling: 4 reports (22 Jul - 1 Aug). Semipalmated Sandpiper: 12 Jul (1) CCNWR (JCR), ers; 18 Nov (11) GSP (DTC, JPC), lrs (good details) and new NA late fall date. Western Sandpiper: 5 reports, all at CCNWR (13 Jul - 15 Aug). Least Sandpiper: 10 Jul (1) CCNWR (JCR), ers; 21 Nov (12) CCSP (JCR), lrs. Baird's Sandpiper: 29 Aug (2) GSP (DTC, JPC); 13 Sep (1) CCNWR (JCR); 25 Sep (1) GSP (DTC, JPC); only reports. Pectoral Sandpiper: 12 Jul (2) GSP (DTC, JPC), ers; 9 Aug (164) CCNWR (JCR), max; 24 Oct (11) GSP (JCR), lrs. Dunlin: 24 Oct (78) GSP (JCR), ers and max. Stilt Sandpiper: 3 Jul (4) GSP (SJS, DTC, JPC), ers; 3 Aug (1) PUC (SJS); 15 Sep (6) CCNWR (JCR), lrs. Buff-breasted Sandpiper: 9 Aug (1) CCNWR (JCR); 28 Aug (1) CCNWR (DWB); only reports. Short-billed Dowitcher: good details on only 3 reports from CCNWR (5 Jul - 15 Aug). Long-billed Dowitcher: 8 Oct (1) CCNWR (JCR), only report (good details). Common Snipe: 10 Aug (1) PUC (SJS, BHS), ers; 12 Aug (1) CCNWR (JCR); 16 Aug (1) DRU (JCR). Wilson's Phalarope: 29 Jul (1) CCNWR (JCR), only report.

Gull — Tern: FRANKLIN'S GULL: 3 Oct (1 first winter) DRU (JCR, DWB, SJS, BHS), only report. Bonaparte's Gull: notable concentrations 15-19 Nov in FKC (SJS, BHS, LHD, KHD), SWC (JCR), and SUC (DTC, JPC). Ring-billed Gull: 22 Sep (2) SWC (JCR), ers. Caspian Tern: 9 Jul (1) CCNWR (DWB), ers. Forster's Tern: 21 Jul (1) PPL, RUC (Anne L. Hettish, Robert Hettish), ers. Black Tern: 30 Jun (8) CCNWR (JCR), ers.

Cuckoo — Creeper: Black-billed Cuckoo: 13 Sep (1) SWC (DWB); 4 Oct (1) PWP (DFV); only reports. Short-eared Owl: 22 Nov (1) DRU (CGD, JCR), only report. Ruby-throated Hummingbird: 17 Oct (1) CLA (AHH), lrs. Yellow-bellied Sapsucker: 26 Sep (1) CLA (AHH), ers. Olive-sided Flycatcher: 16 Sep (1) LBL (DWB); 19 Sep (2) LBL (JCR); only reports. Eastern Wood-Pewee: 17 Oct (1) CRH (*fide* SJS, m.ob.), lrs. Yellow-bellied Flycatcher: 27 Aug (1 b) EWP (DFV, SDB), good details; 4 Oct (1 b) GOR (GRM), no details. "Traill's" Flycatcher: 23 Aug (1 b) MC (DFV), only report; this bird was banded on the territory of a Willow Flycatcher. Eastern Kingbird: 27 Aug (90 in 1 flock following a storm) CCNWR (JCR), max. Horned Lark: 27 Nov (35) CCNWR (JCR, David Chaffin), max. Northern Rough-winged Swallow: 25 Oct (1) CCNWR (JCR), lrs. Cliff Swallow: 20 Sep (2) PUC (SJS), lrs. Barn Swallow: 29 Oct (1) CCNWR (JCR), lrs. Blue Jay: 30 Sep (153 flying SW) PUC (BHS), max. Red-breasted Nuthatch: 3 Oct (2) Cedars of Lebanon S. P., WLC (RVM, Melissa A. Tucker), ers; 17 Oct (7) CRH (*fide* SJS), max. Brown Creeper: 26 Sep (1) CLA (AHH), ers.

Bewick's Wren: 2 Aug - 18 Sep (1-3) 2 km N I-40 on Rt. 109, WLC (Earline C. Berry, Vernon G. Berry); 9 Aug (1) Hurricane Creek, SWC (JCR); 1 Sep (2) MTC (DWB); 8 Sep (1) Taylor's Chapel, SWC (DWB); 18 Sep (1) Dover, SWC (JCR); 6 Oct - EOP (1-2) Tennessee Ridge, Houston Co. (Donette Sellers); 22 Sep (1) Ovaca Lake, Coffee Co. (MDH, Frank Hernandez); an encouraging number of reports, following an excellent Summer 87 season for this species.

Wren — Vireo: House Wren: 6 Nov (1) CLA (AHH), lrs. Winter Wren: 1 Oct (2) BAH (RWS), ers. Sedge Wren: 16 Aug/27 Sep (5/9) DRU (JCR/JCR, CGD), ers/max. Marsh Wren: 27 Sep (9) DRU (JCR, CGD), ers and max. Golden-crowned Kinglet: 2 Oct (2) DUC (JCR), ers. Ruby-crowned Kinglet: 26 Sep (1) RDL (JCR), ers. Blue-gray Gnatcatcher: 20 Sep (3) Fort Donelson

Park, SWC (JCR), lrs. Veery: 7 Sep (2) RDL (JCR, DWB), ers. Swainson's Thrush: 24 Aug (1) CLA (AHH), ers. Hermit Thrush: 5 Oct (1) CLA (AHH), ers; 31 Oct (8) LOV (RCH, FJA), max. Gray Catbird: 20 Oct (1) CLA (AHH), lrs. Water Pipit: 13 Nov (50) Monsanto Ponds, MUC (JPC, DTC, BHS, SJS), max. Loggerhead Shrike: 28 Nov (19) LWC (DJS, Stephen Satterfield, Rebecca Satterfield), max. White-eyed Vireo: 19 Sep (22) LBL (JCR), max. Warbling Vireo: 20 Sep (1) SWC (JCR), lrs. Philadelphia Vireo: 10 reports (9 Sep - 10 Oct), including 5 banded at GOR (GRM).

Warblers: Golden-winged Warbler: 8 reports (30 Aug -26 Sep) from DVC, PUC, SWC. Orange-crowned Warbler: 7 Sep (1) RDL (JCR, DWB), ers and new NA early fall date. Northern Parula: 3 Oct (1) NEWJ (SJS, DWB, JCR, BHS), lrs. Yellow Warbler: 27 Sep (2) NEWJ (JCR), lrs. Chestnut-sided Warbler: 24 Aug (1/1) EWP/DRU (DFV/SJS, BHS), ers. Cape May Warbler: 27 Oct (1 tower casualty) WSMV tower, NASH (DFV, KAG), lrs and new NA late fall date; bird picked up on morning of 29 Oct, but it "appeared that it might have fallen on the night or morning of Oct 27/28" (DFV); thus, the earliest possible date is used above. Black-throated Blue Warbler: 13 Sep (1 female) SWC (DWB); 2 Oct (1) DVC (Margaret L. Mann); 4 Oct (1) SHB (CGD, William Cowart); only reports. Yellow-rumped Warbler: 28 Aug (1) LBL (DWB), ers; very early. Blackburnian Warbler: 24 Aug (1 b) EWP (DFV, SDB), ers. Palm Warbler: 11 Sep (1) LBL (DWB), ers. Bay-breasted Warbler: 23 Oct (1) CLA (AHH), lrs. Northern Waterthrush: 27 Aug (1) EWP (SDB, DFV), ers. Connecticut Warbler: 3 Oct (1) NEWJ (JCR, DWB, SJS), only report with good details. Mourning Warbler: 29 Aug (1 b) MC (DFV); 25 Sep (1) Anne Hettish Marsh, RUC (TJW); only reports (good details). Common Yellowthroat: 24 Oct (1) New Johnsonville Steam Plant, Humphreys Co. (AHH, m.ob.), lrs. Wilson's Warbler: 9 Sep (2) CCNWR (JCR), ers. Yellow-breasted Chat: 27 Sep (1) NEWJ (JCR), lrs.

Tanager — Oriole: Scarlet Tanager: 13 Oct (1) LBL (DWB), lrs. Rose-breasted Grosbeak: 1 Sep (1) CLA (AHH), ers. BACHMAN'S SPARROW: 9 Aug (1 singing) Old Hwy. 76 clearcut, SWC (JCR, DJS), completes a Summer 87 record. Chipping Sparrow: 17 Nov (1) MTC (AHH), lrs. Savannah Sparrow: 27 Sep (11) DRU (JCR), ers. Le Conte's Sparrow: 16-17 Oct (2) CCNWR (JCR, DWB); 7 Nov - EOP (5) Center, LWC (DJS, m.ob. at TOS meeting); only reports. SHARP-TAILED SPARROW: 27 Sep (2) DRU (JCR, CGD), RBRF; 29 Sep - 5 Oct (1) CCNWR (JCR, DWB), RBRF; 16-17 Oct (1) CCNWR (JCR, DWB); only reports. Fox Sparrow: 25 Oct (5) CCNWR (JCR), ers; 28 Oct - 13 Nov (21 b) GOR (GRM). Lincoln's Sparrow: 4 Oct (1/1) PWP/EWP (DFV), ers. Swamp Sparrow: 27 Sep (6) DRU (JCR), ers. White-throated Sparrow: 9 Sep (1) CLA (AHH), ers. Dark-eyed Junco: 30 Sep (1) BAH (RWS), ers. Lapland Longspur: 25 Oct (3) CCNWR (JCR), ers and very early; 1 Nov (1) CCNWR (JCR), only other report. Bobolink: 24 Aug (2) DRU (SJS, BHS, JCR), ers; 25 Aug - 25 Oct (up to 19 on 13 different dates) CCNWR (JCR); obviously, this species must be considered uncommon, not rare, in suitable habitat at this season, although it could be that the fall of 1987 was a much better than average season for it. Brewer's Blackbird: 7 Nov (1 female) Etheridge, LWC (DJS), ers and very early; only report with convincing details. Orchard Oriole: 6 Sep (2) CCNWR (JCR), lrs. Northern Oriole: 6 Oct (1) SWC (DWB), lrs.

Finch — Grosbeak: Purple Finch: 13 Oct (2) SWC (DWB), ers; widespread and in moderate numbers by EOP. House Finch: large numbers reported in

many areas. RED CROSSBILL: 8 Nov (3) LBL (DWB), only report; good description of call notes. Pine Siskin: 3 Oct (1) DRU (JCR, SJS, DWB, BHS), ers; widespread in small numbers by EOP. Evening Grosbeak: reported from many locales in small numbers, but few remaining long.

Addendum: Rose-breasted Grosbeak: 27 Nov 1986 (1 imm male) RDL (C. Rowan DeBold), new NA late fall date.

Locations: BAH — Barnes Hollow, Putnam Co.; CCNWR — Cross Creeks National Wildlife Refuge, Stewart Co.; CCSP — Cumberland City Steam Plant, Stewart Co.; CLA — Clarksville, Montgomery Co.; CRH — Craggie Hope, Cheatham Co.; DRU — Duck River Unit, Tennessee National Wildlife Refuge, Humphreys Co.; DUC — Dunbar Cave State Park, Montgomery Co.; DVC — Davidson Co.; EWP — Edwin Warner Park, Davidson County; FKC — Franklin Co.; FRR — Franklin Reservoir, Williamson Co.; GOR — Gordonsburg, Lewis Co.; GSP — Gallatin Steam Plant, Sumner Co.; JAC — Jackson Co.; LBL — Land-Between-the-Lakes, Stewart Co.; LHL — Laurel Hill Lake, Lawrence Co.; LOV — Love Lady Community, Pickett Co.; LWC — Lawrence Co.; MC — Metro Center, Davidson Co.; MTC — Montgomery Co.; MUC — Maury Co.; NA — Nashville Area (includes all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson, and Wilson Counties, and parts of Dickson and Trousdale Counties); NASH — Nashville; NEWJ — New Johnsonville Sewage Ponds, Humphreys Co.; OHL — Old Hickory Lake (in Davidson, Smith, Sumner, Trousdale, and Wilson Counties); PIC — Pickett Co.; PPL — Percy Priest Lake (in Davidson, Rutherford, and Wilson Counties); PUC — Putnam Co.; PWP — Percy Warner Park, Davidson Co.; RBC — Robertson Co.; RDL — Radnor Lake State Natural Area, Davidson Co.; RUC — Rutherford Co.; SHB — Shelby Bottoms, Davidson Co.; SUC — Sumner Co.; SWC — Stewart Co.; WDR — Woods Reservoir (in Coffee and Franklin Counties); WLC — Wilson Co.; WMC — Williamson Co.

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EASTERN RIDGE AND VALLEY REGION — In general, August was very dry (except at Chattanooga) and hot, September was near average, October was dry and much cooler than average, and November was dry and slightly cooler than average. Precipitation totals for the season were 3.5 to 4 inches deficient at most places. Cold fronts, with their associated waves of migrants, were more regular than during the past 3 fall seasons, when they were scarce.

Two outstanding finds were reported — an Anhinga at Amnicola Marsh and a Vermilion Flycatcher at Austin Springs. Also noteworthy were 2 American White Pelicans and a Lapland Longspur.

Shorebird habitat was somewhat scarce due to infrequent fluctuation of Chickamauga Lake water levels, ash pond manipulation at Kingston Steam Plant, and overall dry conditions. Partly because of this, the shorebird flight was unremarkable. The waterfowl movement was good near Knoxville (no specifics provided) and Chattanooga, but poor in the Johnson City area. Waterfowl counts from the Tennessee Wildlife Resources Agency were recorded on aerial surveys.

Comments on the passerine migration came mostly from 2 banding stations, both in operation for the eighth consecutive fall season. Chuck

Nicholson ran mist nets at Norris from 22 August to 7 November, banding 715 birds of 65 species at a capture rate of 108 birds per 100 net-hours. This rate was close to his overall average and about 20% above that of the previous 3 years. Rick Knight banded 494 birds of 53 species at Austin Springs from 1 September to 24 October. Twenty-eight birds banded there in previous years were recaptured: Carolina Chickadee - 3, Carolina Wren - 1, Gray Catbird - 1, Common Yellowthroat - 1, Field Sparrow - 2, Song Sparrow - 17, and American Goldfinch - 3.

Loon — Ibis: Common Loon: 9 Oct (1) BOL (CFW), ers; 22 Nov (50) TEL (KTOS), max. only 3 found there a week later (MWA, ARH, RCH); 10/22 Nov (8/10) BOL/CHL (RLK/KHD, LHD), max these locations. Pied-billed Grebe: 4 Aug (1) SAB (KHD, LHD), ers; 22 Nov (150) CHL (CDB *et al.*), max. Horned Grebe: 1 Nov (6) TEL (MWA, ARH, RDH), ers; 22 Nov (23/30) TEL/CHL (KTOS/CDB *et al.*), max; 29 Nov (2) BOL (RLK), only sighting there. AMERICAN WHITE PELICAN: late Oct - 8 Nov (2) Sevierville, Sevier Co. (JAK, m.ob.). Double-crested Cormorant: 15 Sep (3) NIL (WKJ); 27 Sep (3) KNC (KTOS); 12 Oct (1) SAB (KHD, LHD); 7 Nov (2) HRA (CTOS); only reports, somewhat below recent numbers. **ANHINGA:** 11 Oct (1) AMM (LHD *et al.*), first regional record, details to be published. Least Bittern: 28 Aug (1) Washington Ferry, upper CHL, Rhea Co. (WKJ). Great Egret: many reports; 19 Sep (49) RAB (JAK), max; 7 Nov (1) LST (JB), lrs. Snowy Egret: 22 Aug (1) HRA (KHD, LHD); 24 Aug (1) SAB (LHD). Little Blue Heron: from last period thru 5 Sep (7-56) HRA (KHD, LHD); 8 Aug (4) Cherokee Lake, HWC portion (RLK); 15/22 Aug (2) RAB (JAK). Cattle Egret: 1 Aug/13 Sep (1/3) HRA (J.W. Knott/KHD, LHD); 10 Oct (18) Norris Lake, Union Co. (Joseph C. Howell). Green-backed Heron: 7 Nov (1) JNB (RLK), lrs. Black-crowned Night-Heron: 15 Aug - 13 Sep (3-7) KSP (m.ob.); present thru 21 Oct (1-8) AUS (RLK *et al.*); thru EOP at Fort Loudoun Dam, Loudon Co. (KTOS). Yellow-crowned Night-Heron: 19 Sep (1) HWC (FJA), lrs. White Ibis: 12, 15 Aug (1, age ?) HRA (KHD, LHD).

Waterfowl: Snow Goose: 7 Nov (1 white) CHL (RJH); 12 Nov (3/3 white) HRA/Watts Bar Lake (TWRA); 22 Nov (1 blue) HRA (CDB *et al.*). Green-winged Teal: 22 Nov (125) HRA (CDB *et al.*), max. American Black Duck: 24 Nov (366) CHL & HRA (TWRA), max. Mallard: 24 Nov (1217) CHL & HRA (TWRA), max. Northern Pintail: 26 Sep (2) LST (RLK, BC), ers; 22 Nov (50) HRA (CDB *et al.*), max. Blue-winged Teal: 15 Aug - 10 Oct several reports of small flocks from throughout the region. Northern Shoveler: 29 Aug - 13 Sep (1-4) KSP (m.ob.). Gadwall: 22 Nov (600) CHL (CDB *et al.*), max. American Wigeon: 12 Nov (170) CHL & HRA (TWRA), max. Canvasback: 31 Oct (1) CHL (KHD, LHD); 27 Nov (7) NIL (RJH); only reports. Redhead: 22 Nov (50) CHL (CDB *et al.*), max. Ring-necked Duck: 22 Nov (1000/1500) CHL/HRA (CDB *et al.*), max, "It is of interest with waterfowl populations down nationwide we are finding these numbers. They seem to be increasing in our area [CHA] during migration, as most have departed by Dec." (*fide* KHD); conversely, only 1 record in the JNC area — 12 Oct (7) BOL (RLK). Greater Scaup: 17 Oct (12) HRA (AMJ), ers. Lesser Scaup: summering male seen thru late Sep in JNC (RLK *et al.*). Common Goldeneye: 22 Nov (6) CHL (CDB *et al.*). Bufflehead: 22 Nov (20) CHL (CDB *et al.*), max. Hooded Merganser: 7 Nov (200) HRA (CTOS), max. Common Merganser: no reports. Red-breasted Merganser: 19/22 Nov (11/10) CHL (RJH/CDB *et al.*). Ruddy Duck: 12 Oct (5) BOL (RLK), ers & earliest JNC/Elizabethton area fall record by 7 days; 22 Nov (130) CHL (CDB *et al.*), max.

Vulture — Crane: Vultures: 4 Nov (48 Blacks, 109 Turkeys) CIC (GWM), max. Bald Eagle: 8 Aug (1 imm) KSP (KHD, LHD, David & Tom Patton); 29 Sep (1 ad) NIL (AMJ); 1/29 Nov (2 ad/1 mm) TEL (ARH, RDH, MWA, LNA); 7 Nov (1 ad) HRA (RJH); 27 Nov (1 ad) NIL (RJH). Northern Harrier & *Accipiters:* few reports; better coverage/reporting needed. Red-shouldered Hawk: 6 Oct (1) AUS (RLK), only JNC area report. Broad-winged Hawk: 24 Nov (1 imm) Union Co. (Steve Satterfield), lrs, very late; details of migration to appear in Autumn Hawk Count report. Red-tailed Hawk: 27 Nov (1 dark phase, reported without details) SQC (RJH). Merlin: 4 Oct (1) Hamblen Co. (GOW); 27 Oct/10 Nov (1) SAB (KHD, LHD); 1 Nov (1) Sewanee airport, Franklin Co. (Harry C. & Jean A. Yeatman). Peregrine Falcon: 7 Oct (1 imm found dead, not banded) struck fence in a JNC yard (*fide* GOW); 19-20 Nov (1 ad) downtown CHA (Dan N. Williams, Jr. *et al.*). Ruffed Grouse: 30 Sep (1) in marsh at AUS (RLK), unusual location. Virginia Rail: 5 Oct (1) AMM (JTP). Sora: 29 Aug (1) HRA (LHD); 26 Sep (1) AUS (RLK); only reports. American Coot: 31 Oct (4000) CHL (KHD, LHD), max. Sandhill Crane: 22 Oct to EOP (23 reports of 1183 birds) HLC, Meigs Co., Bradley Co., SQC, Cumberland Co. (m.ob., *fide* KHD); no reports from KNX area.

Shorebirds: Black-bellied Plover: 7 Nov (1) HRA (CTOS), only report. Lesser Golden-Plover: 10/12 Oct (1) HRA (KHD, LHD/RJH). Semipalmated Plover: 22 Aug (5) KSP (KHD, LHD, RLK, JSL), max; 26 Sep (1) AUS (RLK, BC), lrs. American Avocet: 15 Aug (1) RAB (JAK); 22 Aug (1) KSP (KHD, LHD, RLK, JSL). Greater Yellowlegs: several reports of 1-12 birds; 7 Nov (1) HRA (CTOS), lrs. Lesser Yellowlegs: 25 Oct (1) SAB (KHD, LHD), lrs. Solitary Sandpiper: 26 Sep (1) JNB (RLK, BC), lrs. Spotted Sandpiper: 13 Oct (1) AUS (RLK), lrs. Ruddy Turnstone: 15 Aug (1) KSP (KHD, LHD); 21 Oct (1) KSP (FB, SB), late. Sanderling: 13/15 Aug (2) HRA (KHD, LHD); 2 Sep (1) AUS (RLK); 18 Sep (1) SAB (KHD, LHD); 31 Oct (2) CHL (KHD, LHD). Semipalmated Sandpiper: 29 Aug (40) RAB (JAK), max; 17 Oct (10) HRA (AMJ), lrs. Western Sandpiper: from last period thru 13 Sep (1-10 sporadic) KSP (m.ob.); 17 Oct (1) HRA (AMJ), lrs. Least Sandpiper: to EOP, max 30, at HRA (*fide* KHD). White-rumped Sandpiper: no reports. Baird's Sandpiper: 13 Sep (1) KSP (m.ob.). Pectoral Sandpiper: several reports of up to 61 birds; 1 Nov (2) SAB (KHD, LHD), lrs. Dunlin: 21 Oct (2) KSP (FB, SB), ers; 1 Nov (115) HRA (KHD, LHD), max; 8 Nov (1) LST (RLK), unusual location. Stilt Sandpiper: 2 Aug (1) KSP (KHD, LHD), only report. Dowitcher sp.: 15/29 Aug (1/4) RAB (JAK). Common Snipe: 1 Sep (1) AUS (RLK), ers, very early; 31 Oct (74) HRA (KHD, LHD), max. American Woodcock: 1-19 Oct (1) AUS (RLK).

Gull — Woodpecker: Bonaparte's Gull: 10 Nov (13) BOL (RLK), ers. Ring-billed Gull: 30 Sep (1) AUS (RLK), ers. Herring Gull: 12 Oct (1) BOL (RLK), ers. Caspian Tern: 1, 8 Aug, 7 Sep (1-3) KSP (m.ob.); 10 Sep (2) AUS (RLK). Common Tern: 6 Sep (56) NIL (Peter D. Robinson). Forster's Tern: 31 Oct (1) CHL (KHD, LHD), only report. Black Tern: no reports. Black-billed Cuckoo: no reports. Yellow-billed Cuckoo: 25 Oct (1) CHA (AMJ), lrs, late. Common Barn-Owl: 8 Aug (1) HRA (RJH); mid-Sep (1) JNC (Ken Ripley, TWRA). Common Nighthawk: 25 Sep (500) west KNC (Verna Dimmick), max; last reports (all rather late) — 25 Oct (1) JNC (RLK); 1 Nov (2) KNC (ARH, RDH); 2 Nov (1) CHA (KHD, LHD). Chimney Swift: 13 Oct (2) JNC (RLK), lrs. Ruby-throated Hummingbird: 24 Oct (1) White Pine, JEC (JAK), lrs. Red-headed Woodpecker: 26 Sep (1) LST (RLK, BC); 28 Oct (1) CIC (GWM); only reports.

Flycatcher— Vireo: Eastern Wood-Pewee: 11 Oct (1) AMM (CTOS), lrs. "Traill's" Flycatcher: 1-22 Sep (6 b) AUS (RLK), near average; 1-15 Sep (7 b) NOR (CPN), much higher than average. **VERMILION FLYCATCHER:** 26-28 Sep (1 imm male) AUS (RLK, BC, then m.ob.), second regional record, details to be published. Eastern Kingbird: 11 Aug (60+) AUS (RLK), max; 26 Sep (1) LST (RLK, BC), lrs. Tree Swallow: 19 Sep (about 200) Douglas Lake, JEC (JAK), max; 20 Oct (4) SAB (KHD, LHD), lrs. Northern Rough-winged Swallow: 27 Sep (1) AUS (RLK), lrs. Bank Swallow: 3-11 Sep (4-10) AUS (RLK). Cliff Swallow: 22 Sep (1) AUS (RLK), lrs. Barn Swallow: 18 Oct (2) SAB (KHD), lrs. Red-breasted Nuthatch: 18 Sep - 11 Oct (1) Harrison, HLC (Elena Killian), only CHA area report; 4 Oct (1) CIC (GWM), earliest of the very few KNX area reports; no reports from JNC area. House Wren: 14 Nov (1) CHA (AMJ), lrs. Sedge Wren: 20 Aug (1) SAB (LHD); 9 Nov (1) AMM (JTP). Marsh Wren: 23-30 Sep (1-2) AUS (RLK); 9 Nov (1) AMM (JTP). Golden-crowned Kinglet: 12 Oct (5) BOL (RLK), ers. Swainson's Thrush: 22 b at NOR was "lowest number ever" (CPN). Water Pipit: 17 Oct (6) HRA (AMJ), ers. Loggerhead Shrike: 19 Sep (1) HWC airport (FJA); 29 Nov (1/1) BOL/Maryville, Blount Co. (RLK/JAK); only reports. White-eyed Vireo: 18 Oct (1 recaptured b) NOR (CPN), lrs. Solitary Vireo: 1 Nov (1) JNB (JB), lrs. Yellow-throated Vireo: 29 Oct (1) CIC (GWM), lrs, late. Warbling Vireo: 4 Sep (1 b) AUS (RLK), only report. Philadelphia Vireo: 13 Sep (3 b) NOR (CPN), "all in same row of nets at same time." Red-eyed Vireo: 1 Sep (ad vireo feeding imm cowbird) AUS (RLK), late breeding.

Warblers: Blue-winged Warbler: 6 Oct (1 b) NOR (CPN), lrs, late. Orange-crowned Warbler: 3 Oct (1 b) AUS (RLK). Yellow Warbler: 1 Sep (1 b) AUS (RLK), lrs. Yellow-rumped Warbler: 1 Oct (1 b) AUS (RLK), ers. Black-throated Green Warbler: 20 Oct (1 b) NOR (CPN), lrs. Prairie Warbler: 27 Sep (1 b) AUS (RLK), lrs. Palm Warbler: 14 Sep - 25 Oct (16 b, low) AUS (RLK). Bay-breasted Warbler: 12 Oct (1/1 b) BOL/NOR (RLK/CPN), lrs. Ovenbird: 19 Sep - 2 Oct (7 b, well above average) AUS (RLK). Northern Waterthrush: 6 Sep - 2 Oct (14 b, more than twice average) AUS (RLK); 18 Oct (1) AUS (RLK), lrs. Mourning Warbler: 14 Sep (1 b) AUS (RLK). Common Yellow-throat: 54 b at AUS, above average (RLK); 21 Oct (2) AUS (RLK), lrs. Hooded Warbler: 13 b at NOR, 50% above average (CPN). Wilson's Warbler: 3 Sep (1) Pickett State Park, Pickett Co. (SJS, BHS); 14-19 Sep (4 b) AUS (RLK). Canada Warbler: 27 Sep (2) KNC (KTOS), lrs. Yellow-breasted Chat: 18 Oct (1 b) NOR (CPN), lrs.

Grosbeak — Grosbeak: Rose-breasted Grosbeak: 12 Oct (1) BOL (RLK), lrs. Blue Grosbeak: 11 Oct (1) KNC (ARH), lrs. Indigo Bunting: 3 Sep (ad feeding fledglings) NOR (CPN), late breeding; 41 b at NOR, second highest ever (CPN). Vesper Sparrow: 15-21 Oct (1) AUS (RLK). Savannah Sparrow: 13 Sep (4) KSP (SJS, BHS, ARH, RDH), ers. Fox Sparrow: 24 Oct (1 b) NOR (CPN), ers. Song Sparrow: 7 Oct (1 recaptured — originally banded 3 Sep 1980 as adult, at least 8 years old) AUS (RLK). Lincoln's Sparrow: 23 Sep - 18 Oct (4 b, low) AUS (RLK); 26 Sep - 20 Oct (4 b) NOR (CPN). Swamp Sparrow: 26 Sep (1) AUS (RLK), ers. White-throated Sparrow: 27 Sep (1 b) AUS (RLK), ers. White-crowned Sparrow: 19 Oct (1 b) AUS (RLK), ers, late. Dark-eyed Junco: 27 Sep (2) KNC (KTOS), ers, early. LAPLAND LONGSPUR: 24 Oct (1) AUS (RLK *et al.*). Bobolink: 29 Aug (1) KSP (m.ob.), ers; a few small flocks reported; 8 Oct (1) KSP (FB, SB), lrs. Rusty Blackbird: 17 Oct (3) HRA (AMJ), ers. Orioles: 11 Aug (4+ Orchards, 5+ Northerns) AUS (RLK). North-

ern Oriole: 29 Aug (1 b, only second ever) NOR (CPN). Purple Finch: 24 Oct (2) NOR (CPN), ers; widespread in low numbers at EOP. Pine Siskin: 18 Oct (5) NOR (CPN), ers; 19 Oct (18/1) CIC/AUS (GWM/RLK); small flocks widespread over northern half of region by EOP; no reports from CHA. Evening Grosbeak: no reports.

Corrigenda: Migrant 58:27, 1987: The Black Scoter reported as the 12th state record was actually the 13th state record, since another was seen earlier the same day in the Highland Rim and Basin Region (p. 23). *Migrant* 58:62, 1987: JAR — Jo Anne Routledge was omitted from the list of observers.

Locations: AMM — Amnicola Marsh, Hamilton Co.; AUS — Austin Springs, Washington Co.; BOL — Boone Lake, Sullivan & Washington Cos.; CHA — Chattanooga: CHL — Chickamauga Lake, primarily Hamilton Co.; CIC — Claiborne Co.; HLC — Hamilton Co.; HRA — Hiwassee River Area, primarily Meigs Co., but also Bradley, McMinn & Rhea Cos.; HWC — Hawkins Co.; JEC — Jefferson Co.; JNB — Jonesborough, Washington Co.; JNC — Johnson City; KNC — Knox Co.; KNX — Knoxville; KSP — Kingston Steam Plant, Roane Co.; LST — Limestone, Washington Co.; NIL — Nickajack Lake, Marion Co.; NOR — Norris, Anderson Co.; RAB — Rankin Bottoms, Cocke Co.; SAB — Savannah Bay, Hamilton Co.; SQC — Sequatchie Co.; TEL — Tellico Lake, Monroe Co.

RICHARD L. KNIGHT, 804 North Hills Drive, Johnson City, TN 37604.

EASTERN MOUNTAIN REGION — All 4 months had above average temperatures, with very few cool spells. At Elizabethton, the first killing frost was in the first week of October, about normal. Cool temperatures did not arrive until early November. Precipitation for the 4 month period was about 4 inches below average, with 1 and 0.9 inches of rain in August and October, respectively.

Several unusual sightings were reported from throughout the area. The bluebird population in the northern part of the region remained low. On the other hand, there were good numbers of migrating Gray-cheeked and Swainson's Thrushes, Northern Waterthrushes, and American Redstarts.

Loon — Falcon: Common Loon: no reports received. Pied-billed Grebe: 2 Sep (1) Watauga River, Carter Co. (HHF), ers. Great Blue Heron: 2-5 in ELI area from mid-Sep to EOP (LHTOS). Great Egret: 14 Aug (1) RNC (RLK). CATTLE EGRET: 5 Sep (2) SMB (GDE). Green-backed Heron: 9 Oct (1) Hunter Swamp, ELI (HHF), lrs. Yellow-crowned Night-Heron: 29 Sep (1) ELI (GDE), lrs. Canada Goose: 1 Aug - 20 Sep (50-55), then 22 Sep to EOP (125-140) RZF (LHTOS). Blue-winged Teal: 21 Sep - 6 Oct in ELI area, poor migration (*fide* GDE). Gadwall: 13 Nov (2) WIL (GDE), only report. Greater Scaup: 1 Nov (1) WIL (GDE), only report. Common Goldeneye: 16 Nov (1) WIL (CFW). Bufflehead: 1 Nov (7) WIL (GDE), ers, late. Hooded Merganser: 23 Nov (4) Ripshin Lake, Carter Co. (CFW), ers. Osprey: 12 Sep - 16 Oct in ELI area (LHTOS). BALD EAGLE: 29 Nov (1 imm) Cove Ridge (GDE). Northern Harrier: 26 Sep (1) RNM (FJA); 26 Sep (1) HOM (GOW, CFW, HL); 19 Oct (1) UNM (FJA); 22 Nov (1) ELI (HHF). NORTHERN GOSHAWK: 9 Nov (1) RNM (FJA); 15 Nov (1) RIM (GDE); 22 Nov (1) RNM (RLK). Red-shouldered Hawk: 26 Sep (1) HOM (GOW, CFW, HL). Broad-winged Hawk: 20 Sep (316) LKR (ARH, RDH). PEREGRINE FALCON: 22 Aug (1) RNM (Brenda Hull); 3 Oct (1) LKR (ARH, RDH); 19 Oct (1) UNM (FJA).

Rail — Swallow: Virginia Rail: 22 Nov (1) TLR (KTOS). Sandhill Crane: 22 Nov (3) TLR (KTOS). Least Sandpiper: 4 Oct (4) SMV (HL), lrs. Pectoral Sandpiper: 20 Aug (1) St. Johns, Carter Co. (GDE); 26 Sep (4) RNC (GDE, HHF). Ring-billed Gull: 11 Nov (35) ELI (GOW), ers. Yellow-billed Cuckoo: 29 Sep (1) SMV (HL), lrs. Great Horned Owl: reported from 6 locations in ELI area (LHTOS). Barred Owl: 7 Aug (1) HOM (GOW); 26 Sep (1) RIM (FJA). Common Nighthawk: 13 Oct (2) ELI (HHF), lrs. Whip-poor-will: 26 Sep (2) WIL (GOW, CFW, HL), lrs, late. Chimney Swift: 17 Oct (50) ELI (FJA), lrs. Red-headed Woodpecker: 26 Sep - EOP (1-2) ELI (LHTOS); 3 Oct (7) LKR (ARH, RDH). Yellow-bellied Sapsucker: 26 Sep (3) ELI (GDE, HHF), ers. Least Flycatcher: 26 Sep (2) RNM (FJA), lrs. Olive-sided Flycatcher: 12 Sep (1) RNSP (LHTOS); 26 Sep (1) Cove Ridge (GDE, HHF, EHS). Purple Martin: 6 Aug (3) ELI (*fide* GDE), lrs. Cliff Swallow: 5 Sep (25) RZF (GDE), lrs. Barn Swallow: 2 Oct (2) ELI (HHF), lrs.

Nuthatch — Warbler: Red-breasted Nuthatch: 17 Sep (2) RNM (GOW), ers, then numerous in spruce-fir forest. Gray-cheeked Thrush: 19 Oct (1) ELI (HHF), lrs. Swainson's Thrush: 10 Sep - 24 Oct (numerous) ELI area (LHTOS). Hermit Thrush: 2 Nov (1) ELI (HHF), ers. Water Pipit: 22 Nov (1) RNM (RLK), only report. Solitary Vireo: 31 Oct (1) Milligan College, Carter Co. (FJA), lrs. Philadelphia Vireo: 10 Sep (2) RNC (GDE, HL); 26 Sep (1) RIM (FJA). Blue-winged Warbler: 20 Sep (1) SMV (HL). Tennessee Warbler: 19 Oct (2) ELI (HHF), lrs. ORANGE-CROWNED WARBLER: 8 Nov (1) ELI (GDE). Yellow-rumped Warbler: 26 Sep (2) RNC (GDE, HHF), ers. Pine Warbler: 2 Oct (1) WIL (Sally Goodin, Martha Dillenbeck), lrs. Palm Warbler: 24 Oct (1) RZF (CFW), lrs. Blackpoll: 26 Sep (1) RIM (FJA). Cerulean Warbler: 26 Sep (2) SMV (GOW, CFW, HL). American Redstart: 17 Oct (2) ELI (HHF), lrs. Worm-eating Warbler: 20 Sep (1) SMV (HL), only report. Common Yellowthroat: 21 Oct (1) RZF (CFW), lrs. Wilson's Warbler: 26 Sep (1) RIL (FJA).

Tanager — Grosbeak: Summer Tanager: 28 Sep (1) SMV (HL), lrs. Scarlet Tanager: 10 Oct (1) SMV (HL), lrs. Grasshopper Sparrow: 26 Sep (1) RZF (GOW, CFW, HL), lrs. Fox Sparrow: 21 Nov (1) ELI (HHF), ers. White-throated Sparrow: 26 Sep (2) ELI (Lynn Miller), ers. White-crowned Sparrow: 13 Oct (1) SMV (HL), ers. SNOW BUNTING: 7 Nov (1) Unicoi Mtn. (EHS). Bobolink: 26-27 Sep (36) SMV (GOW, HL). Northern Oriole: 12 Sep (1) RMSP (GDE, GOW), lrs. Purple Finch: 26 Oct (2) GSMNP, Blount Co. (CPN), ers. Red Crossbill: 24 Oct (2) RNM (FJA); 4 Nov (25) GSMNP (Terry J. Witt); 22 Nov (2) RNM (RLK). Pine Siskin: 15 Oct (2) ELI (HHF), ers; many flocks of 150-200 reported later in season (*fide* GDE). Evening Grosbeak: **25 Aug** (1 female at feeder) Bristol (Brenda Hull), very unusual date; 4 Nov (6) GSMNP (Terry Witt), first normal winter arrivals.

Locations: ELI — Elizabethton; GSMNP — Great Smoky Mountains National Park; HOM — Holston Mountain; LKR — Look Rock, Blount Co.; RNC — Roans Creek, Johnson Co.; RNM — Roan Mountain; RMSP — Roan Mountain State Park, Carter Co.; RZF — Razor Farm, Carter Co.; SMV — Siam Valley, ELI; TLR — Tellico Refuge, Monroe Co.; WIL — Wilbur Lake, Carter Co.;

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RED CROSSBILLS BREED AT HIGHLANDS, NORTH CAROLINA

Douglas B. McNair
303 Robinson Street, Rockingham, North Carolina 28379

I have conducted monthly trips to the southern Blue Ridge Mountains since the fall of 1983 and have detected Red Crossbills (*Loxia curvirostra*) only from June through January. I saw a family of Red Crossbills within the town of Highlands (1160 m), North Carolina, on 9 September 1986. Both parents were adults (see Phillips 1977) and the four young were juveniles, i.e., with uncrossed bills, indicating the family was within or near their breeding territory (Newton 1972, Nethersole-Thompson 1975). The male called frequently as he maintained contact with other family members and warned them of intruders. The female accompanied all young though the male sometimes accompanied one or two young. All six crossbills, especially the male, licked salts with their tongues from gravel on the ground. When not licking salts, the family spent its time perched, and they fed occasionally in nearby deciduous and coniferous trees. The habitat was open white pine (*Pinus strobus*) and Canadian hemlock (*Tsuga canadensis*) forest. I watched the family for 30 min.

H. Parker (in litt.) saw a pair of Red Crossbills copulate, and watched the female build a nest, accompanied by the male, on 24 July at a site 2 km from the area where I saw the family of crossbills on 9 September. The nest was incomplete on 24 July but apparently complete on 8 August when I first saw it in a tuft of pine needles at the end of a branch about 5 m long. The nest was 4 m below the top of a 25-m white pine and placed on the southeast side of the tree which was located along a paved road beside the Highlands Nature Center. An adult male was on territory, singing frequently from the top of the nest tree and adjacent white pines, which agrees with earlier observations of H. Parker. I watched the nest through September even though the pair of crossbills had abandoned the nest by 8 August for unknown reasons.

At another location, I saw a female gathering *Usnea* lichen on 23 July. She was attended by her mate (adult plumage), but I was unable to locate the nest. The habitat was white pine woods surrounding the golf greens of Highlands Country Club, located about 3 km west of Highlands.

About 16–18 other adult males established territories in the southern Blue Ridge Mountains from Highlands to Sapphire at elevations ranging from 946 m to 1220 m during 1986. Males, alone or in groups, sang from the tops of trees, usually white pines (cf., Nethersole-Thompson 1975). They also chased females frequent-

ly, performed display flights, courtship-fed females, and defended their small territories from other males. Singing behavior reached a peak from the latter half of July through the first half of September and declined rapidly thereafter. Habitat was open mature white pine forest as well as white pine and hemlock forest. The most favorable sites were High Hampton Inn at Cashiers and Highlands Country Club. Nesting behavior, nest-site, and nest-habitat information cited herein is typical of Red Crossbill (Newton 1972, Nethersole-Thompson 1975).

A numerous non-breeding population of Red Crossbills existed in the southern Blue Ridge Mountains of North Carolina in 1986. I first detected crossbills on 24 June and saw only adults until 29 July, though I could have overlooked immatures. Many, if not most, crossbills did not establish territories and were nomadic, staying at sites for only a few days. These small groups usually consisted of males, with smaller numbers of females. On 29 July, one immature in a family group was fed by a female after it begged from her but these crossbills were post-breeding birds that had dispersed or migrated an unknown distance away from their natal or breeding localities. I detected more immatures in small groups of crossbills after 29 July and have no evidence that these small groups nested locally.

Thus, breeding and non-breeding crossbills overlapped each other in their timing of occurrence and distribution in these habitats. Population turnover was high at many sites and I can only conjecture what percentage of crossbills in the southern Blue Ridge Mountains were non-breeding birds in the summer and early fall of 1986. Certainly, the percentage was very high.

I also visited Linville Falls, Avery County, in northwestern North Carolina, on 11–12 August 1986 and found about 15 Red Crossbills in forests consisting of white pine and mixtures of white pine and hemlock at 946 m to 988 m. Many males were apparently on territory singing and 3 males performed display flights. I also saw a small group of crossbills which contained several immatures. The white pine and hemlock cone-crop was excellent.

Cone-crop production of all species, both natural and introduced, was excellent in 1986 in the southern Blue Ridge Mountains from Highlands to Sapphire. White pine and hemlock cones were green in June and July. All species' cones began to mature by mid-August. All cones were brown and at least half open by mid-September. Crossbills rarely fed on white pine cones until they began turning brown in mid-August. Thereafter, crossbills preferred feeding on white pine cones but frequently fed on hemlock cones also. Until mid-August, crossbills preferred to feed on green and brown hemlock cones as well as on cones of less common ornamental larches. When crossbills did feed on white pine cones during this period, they spent an extraordinary amount of time bill-wiping to remove pitch from their bills, much more so than when feeding on the cones of hemlock. The aversion of crossbills to feeding on green resinous pine cones was also demonstrated on 29 July when a group of 6 fed for 45+ min on prematurely open brown cones of a single white pine that had been recently killed by lightning. Cones on all other white pines were green.

D. Johnston (1963) saw a pair of crossbills and watched the female gather *Usnea* lichen in a forest of white pine and hemlock near Highlands of 27 July 1963, but he did not locate the nest. Unfortunately, Johnston did not give cone-crop information. Until 1986, his observation was the only evidence of probable or confirmed breeding for the Highlands area.

In the fall of 1983, I made my first trip to the southern Blue Ridge Mountains on 26 September and crossbills were numerous in Highlands from then to 21 November, peaking on 30 October (100 crossbills). I saw my last crossbills of that

season on 8 January 1984. Many immatures in family groups were present on 26 September. Several of the immatures begged unsuccessfully from older birds. Unfortunately, I did not visit earlier and do not know if crossbills nested locally. J. Groth and I banded 53 crossbills of all age and sex classes from 30 October to 21 November. The adults and second-year birds had nearly completed their molt, their feathers sheathed to a varying degree, especially on the upper- and undertail coverts. All birds had new remiges with the exception of one old primary number nine on one adult male. Most birds had little or no fat.

Cone-crop production of all species was superb in 1983 at Highlands and excellent at Cashiers. All cones were brown and open by my first visit on 26 September. The majority of cones had fallen to the ground by mid-November. Crossbills fed almost exclusively on white pine seeds, despite the ready availability of seeds from hemlocks and ornamental conifers such as spruces (*Picea* spp.) and larches (*Larix* spp.). Occasionally, crossbills, particularly the immatures, fed on buds of young white pine and deciduous trees. Crossbills also fed upon unidentified items on twigs and oak (*Quercus* spp.) leaves. Crossbills of all sexes and age licked salts.

In 1984, I only saw three crossbills on 21 October in Highlands and Cashiers. Crossbills were present from 11 September to 27 October in 1985, with a maximum of 15 seen on any one day. In 1987, crossbills were present from 25–29 June with a maximum of 16 in Highlands on 29 June, and from 3 September to 1 December, with a maximum of 10 on 3 September.

Cone-crop production of all species was poor in 1984, non-existent in 1985, and poor in 1987 at Highlands and Cashiers. I saw no crossbills feeding on any cone seeds except in 1987 when a small flock fed on open hemlock cones. The crossbills I saw usually fed on buds, twigs, and leaves of red maples (*Acer rubrum*), tulip poplars (*Liriodendron tulipifera*), and other similar foods.

Overall, the limited data on Red Crossbills in the southern Blue Ridge Mountains from Highlands to Sapphire indicate that breeding is probably timed so that hatching coincides with the opening of white pine cones in August and September, which facilitates feeding of the young. Hemlock cones are the other major seed source of Red Crossbills during, and especially preceding, the breeding season. Pulliainen (1972) demonstrated that Red Crossbills in Finland selected green and brown spruce cones, both on the trees and ground, and did not feed on green pine cones, richer in nutrients, which were then available. Nethersole-Thompson (1975) found that crossbills in some years persistently fed on larch cones, before switching to the pines just before nesting. In New York, Messineo (1985) found that at least several pairs of Red Crossbills bred and suspected that many more nested. These crossbills favored feeding on spruce cones, also fed heavily on hemlock cones, and occasionally fed upon white pine cones, but only when their cones were open. At a different locality in New York the same season, crossbills fed heavily on hemlock seeds when its cone-crop was superb and the white pine cone-crop was non-existent (Yunick 1985). Breeding was strongly suspected but unproven. Benkman (1987) demonstrated that Red Crossbills switched from foraging on other conifers to White Pines when the latter species cones began to open in early autumn in Northeast USA and adjacent Canada. Thus, it appears that Red Crossbills do not favor feeding at many species of pines until their cones have begun to open, despite having seeds richer in nutrients than other conifer seeds upon which crossbills also feed. Red Crossbills are probably not able to extract pine seeds from green cones efficiently, perhaps because of the considerable difficulty of removing pitch from their bills.

Acknowledgments. I thank H. Parker for sending me information on Red Crossbills at Highlands in 1986 and J. Groth, G. A. Hall and R. P. Yunick for reviewing this note.

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IN MEMORIAM

The Migrant, 59(2):48, 1988

IN MEMORIAM: JOHN SCUDDAY HERBERT

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Members of the Nashville Chapter of the Tennessee Ornithological Society were saddened to learn that Mr. John S. Herbert died 19 November 1987. Mr. Herbert had been an active member of TOS for many years and had served as president of the Nashville Chapter. John helped his wife, Martha, establish a bluebird trail that radiated from their farm, Rabbit Hill, in Cheatham County. Upwards of 50 nest boxes became favorite nesting sites for many Eastern Bluebirds. In addition to keeping the Herbert boxes in good repair, John distributed bluebird boxes to many bird club members.

After graduating from Vanderbilt University, John devoted himself to the family business of firing brick and making other building materials. He was a member of the Down Town Presbyterian Church. He expressed his interest in conservation of natural resources by serving as Chairman of the Board of Directors of the Cumberland Museum and Science Center.

John Herbert was a good friend whom we will all miss.

The Migrant, 59(2):49–50, 1988

BREEDING ATTEMPT OF PINE SISKIN ON MT. MITCHELL, NORTH CAROLINA

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Pine Siskins (*Carduelis pinus*) have been recorded in the Black Mountains of North Carolina since Brewster (1886) first found them rather numerous and singing on 2 June 1885. Cairns (1889) stated that siskins were resident and common but cited no actual breeding evidence. Purported breeding-season reports have occurred since the 1880s (see Simpson 1972), but no evidence of breeding has been cited, other than possible breeding suggested by the presence of singing males or of birds flying overhead and calling over a period of at least a week.

I discovered a female Pine Siskin building a nest on a horizontal limb of a 15-m high Fraser fir (*Abies fraseri*) on the northeast slope of Mt. Mitchell 75 m below the summit on 2 June 1986. The breeding habitat was open Fraser fir forest. Windfall was widespread because many fir trees were felled by disease and harsh climate. From 0708 to 0730, the female siskin made eight trips to the large flat nest hidden among thick foliage at the end of the fir limb which was 6.7 m above ground. On all her trips to the nest, the female added *Usnea* lichen, which she had pulled off the bark of firs at mid-height no more than 30 m away from the nest. She spent a maximum of 20 sec at the nest on each visit, calling fairly often, and the male perched nearby and occasionally sang. I did not see the female siskin continue to build the nest after 0730 despite extensive observations later in the day. The nest appeared to be fairly complete except for some flimsy construction for one-quarter length of the nest circumference.

I returned to Mt. Mitchell on 8 June. The nest was bulkier, with the circumference and rim apparently complete. However, I saw no nest-building on this day or on any subsequent visits. The pair of Pine Siskins abandoned the nest for unknown reasons. Nest-site characteristics are typical of Pine Siskin nests (Palmer 1968 and others).

The breeding pair associated with 8–14 other Pine Siskins which ranged as far away as 4 km from the summit of Mt. Mitchell. Pine Siskin numbers declined during June; only four remained by 26 June and I saw none later in August. On an earlier visit to Mt. Mitchell on 2 April, I had detected no Pine Siskins. I saw no other Pine Siskins in fir and red spruce (*Picea rubens*) forest of the Black Mountains from May through July nor did I see any in similar habitat of the nearby Great Balsam Mountains during the same period. Marcus Simpson, Jr. and Glen Eller (in litt.) saw small numbers of Pine Siskins in early June at Shining Rock Wilderness and Roan Mountain, respectively, but neither individual detected any breeding evidence.

At Mt. Mitchell during June, the breeding pair or other pairs or threesomes showed other evidence of breeding, aside from the abandoned nest. Males sang and chased frequently. Males courtship-fed females several times, once by the breeding male during the nest-building period. During June, display flights by males between treetops and across or within clearings on mountainsides over known or suspected breeding areas were fairly frequent. Significantly, the breeding male never defended his small nesting territory around the nest-site. Pine Siskins are Cardueline finches which do not establish territories until after the nest-site has been chosen (Newton 1972).

The siskins' preferred food was the unripe seeds of dandelion (*Taraxacum* spp.)

heads upon which siskins fed heavily along the roadside verges (cf. Stupka 1963, Stevens *in* Palmer 1968, Newton 1972, Hall 1983). I also saw Siskins feed on insects, their larvae and eggs, on developing fir and spruce buds and leaves, on buds and tender leaves of other species, and on seeds at a single bird feeder. Siskins also frequented a salt and mineral lick where they pecked at powdery crusts of pulverized gravel (cf. Bennetts and Hutto 1985). Perhaps significantly, Pine Siskins did not attempt to feed on conifer seeds, which is their preferred food (Palmer 1968, Newton 1972, Widrlechner and Dragula 1984), because seeds were not available. Cone-crop production was non-existent until early June, when siskins were unable to extract seeds from the few immature cones of Fraser fir.

Acknowledgments. I thank J. Groth, G. A. Hall and R. P. Yunick for their constructive reviews.

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Acccepted 22 June 1988.

ROUND TABLE NOTES

The Migrant, 59(2):51–52, 1988

NORTHERN ROUGH-WINGED SWALLOWS BUILD NESTS IN SEMI-TRAILERS—On 25 May 1986 at about 1000 (CDT) in Celina, Clay County, Tennessee, we noticed an adult Northern Rough-winged Swallow (*Stelgidopteryx serripennis*) pick up a twig from the ground and fly with it to the underside of a parked semi-trailer. The bird flew to the front end of this 12 m-long container vehicle and entered a hole in the undercarriage. It flew out a few moments later, picked up another piece of nesting material, and returned to the same hole. This behavior was repeated 6–8 times. Although a second N. Rough-winged Swallow was nearby, we did not observe it carrying nesting material or entering this cavity.

Approximately one-half hour later in another area of Celina about 1 km from the first site, we noticed a pair on N. Rough-winged Swallows perched near a second parked semi-trailer, also unattached to a cab. A few minutes after we first noticed the birds, one flew to the front underside of the trailer and entered a cavity located in about the same position in this semi-trailer as the location of the cavity used by the birds in the other semi-trailer. A few minutes later a bird carried nesting material into the hole. We then inspected the nest site closely, and although it was difficult to see into the cavity where the birds had entered, we determined that a mass of material composed of twigs and similar items had been deposited near the cavity entrance. The entrance hole was approximately 15–20 cm square, while the cavity itself was about 15 cm from top to bottom and perhaps a square meter in extent and was constructed of wood. The nest was 15–20 cm across and 1–2 cm high. The trailer in which this nest was placed was parked at a loading dock.

Later in the day we passed by a third semi-trailer, also unattached to a cab, parked on the outskirts of Celina at least 4 km from either of the other two sites. We stopped and immediately noted a pair of N. Rough-winged Swallows perched nearby. A few minutes later both birds flew to the front underside of the trailer and entered a hole. In this case no nesting material was observed being carried into the cavity, and it is possible that the birds were merely inspecting a potential nest site. However, since the birds remained in the hole for several minutes, we felt it more likely that they were intending to nest there, or actually had a nest. The trailer was parked in a private driveway, which prevented our inspecting it, and it appeared to have been so parked for some time.

This site was less than 100 m from an abandoned rock quarry which appeared capable of supplying ample nesting substrate for the swallows. However, we saw no swallows in the quarry during the 10 minutes we were present, possibly indicating that the swallows had deliberately selected the semi-trailer site in preference to the more natural one available nearby in the quarry. Lunk (1962) also noted what appeared to be preferential selection of artificial nesting sites over more usual sites by this species.

As followup visits to these sites were not possible during the remainder of the 1986 nesting season, we do not know the results of these nesting efforts. However, Simbeck recorded the following data about a similar nesting attempt by this species a year later at a site more than 200 km from Clay County. At 0915 (CDT) on 18 May 1987 in Loretto, Lawrence County, Tennessee, he noticed an adult N. Rough-winged Swallow carrying nesting material into a hole in the underside of a parked semi-trailer. At 1500 he checked the hole and found a partial nest. The trailer was removed, presumably to a distant location, on 19 May 1987, but two swallows remained in the vicinity through 20 May 1987, after which they were not seen again.

Northern Rough-winged Swallows are well-known for the variety of cavities in which they nest and in particular for the extensive use they make of man-made structures (Dingle 1942). However, vehicles of any sort have seldom been reported as nesting sites. Hoxie (1901) described a nest of this species which was built on a tugboat in Port Royal, Virginia; Howell (1924) described a nest placed "on a buttress beneath the deck of a transfer steamboat which made daily trips on the Tennessee River" in Alabama; and Skutch (1960) also noted nests of this species built on traveling river steamers in Central America. Neither Harrison (1975) nor Lunk mention nesting by this species in semi-trailers or in any other land vehicles. The current observation adds to the list of substrates in which this very opportunistic species will nest.

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THE 1988 SPRING FIELD DAYS

Damien J. Simbeck

A total of 209 species was found on six Tennessee counts in 1988. Most notable were all three species of scoters at Nashville, a Northern Goshawk at Elizabethton, and a Sharp-tailed Sparrow at Nashville. Most counts reported fair weather, which was typical throughout the spring. The period prior to the counts was relatively warm and dry throughout the state. Migration seemed to be later this year, with earlier counts missing some regularly occurring species.

As usual, the counts are tabulated from west to east.

INFORMATION ON THE COUNTS

Memphis—8 May; 0730–2000; partly cloudly to overcast; wind S 15–25 mph; temp. 63–82°F. Shelby Forest S.P. in AM, Penal Farm, Ensley and Robco Lake in PM. Party leaders: Ben B. Coffey, Jr. (compiler—672 N. Belvedere, Memphis, 38107), Lula C. Coffey, Dianne Bean, Carolyn Bullock, George R. Payne, Jr., Jeff R. Wilson. 84 of the Mississippi Kites were in a single kettle.

Columbia—6–7 May; clear; wind NW 10–20 mph; temp. 48–85°F. 9 observers; Kenneth Anderson, Brad Hammond, Wm. Jernigan, Allyn Lay, Cleo George R. (compiler—999 Sunnyside Dr., Columbia, 38401) and Mark Mayfield, Jane Oakes, Allen Pressnell.

Nashville—29 April–1 May; fair; temp. 45–70°F. 13 parties (TOS spring meeting); Ann Tarbell (compiler—6033 Sherwood Dr., Nashville, 37215). Scoters by Jerry Drewry 4/29; Sharp-tailed Sparrow by John Robinson 5/1.

Highland Rim—29–30 April; cloudy and warm; 27 observers.

Knoxville—24 April; clear; wind light and var.; temp. 56–70°F. 33 observers in 16 parties. Frank Bills, Sharon Bostick, Jim and Betty Reid Campbell, Howard Chitwood, Andrew Core, Bill Cowart, Drew Cowherd, Marcia Davis, Barry Fleming, Lou Fuller, Brice Gilmer, Paul Hartigan, Ron (compiler—4523 McCloud Rd., Knoxville, 37938) and Audrey Hoff, Joe Howell, Susan Hoyle, Tony and Nellie Koella, Beth Lacy, Chuck Nicholson, Holly Overton, Paul Pardue, Truett Patterson, Don Powers, Mark Reeves, Ken and Mable Sanders, Boyd Sharp, Jim Tanner, Elaine Tjoelker, Craig Walker, Ralph Zaenglein. Also reported: one cuckoo sp.

Elizabethton—8 May; 0330–2130; clear to partly cloudy; wind 3–8 mph; temp. 46–82°F. 20 observers in 7 parties; Rick Knight (compiler—804 N. Hills Dr., Johnson City, 37604). Good details for Northern Goshawk and Dickcissel.

Table 1. 1988 Spring counts.

	MEMP	COLU	NASH	HIGH	KNOX	ELI
Common Loon	—	—	—	—	1	—
Pied-billed Grebe	—	17	7	—	1	—
Double-cr. Cormorant	6	1	8	—	15	3
American Bittern	—	—	4	1	—	—
Great Blue Heron	30	4	8	13	24	1
Great Egret	1	—	1	—	1	—
Little Blue Heron	1	—	—	—	—	—
Cattle Egret	—	—	—	—	1	—
Green-backed Heron	4	13	15	4	13	9
Bl.-cr. Night-Heron	1	2	10	—	1	—
Ye.-cr. Night-Heron	3	—	3	2	—	—
Snow Goose	—	2	—	—	—	—
Canada Goose	—	121	40	40	21	91
Wood Duck	19	24	75	4	46	48
Am. Black Duck	—	—	1	—	—	—
Mallard	43	9	19	7	13	63
Northern Pintail	—	1	—	—	—	—
Blue-winged Teal	—	20	23	—	13	—
Northern Shoveler	1	—	1	—	—	—
Ring-necked Duck	—	1	2	—	—	—
Lesser Scaup	—	1	1	—	—	2
Black Scoter	—	—	3*	—	—	—
Surf Scoter	—	—	3*	—	—	—
White-winged Scoter	—	—	3*	—	—	—
Bufflehead	—	—	1	—	—	—
Red-br. Merganser	—	—	—	—	2	—
Ruddy Duck	6	—	2	—	—	—
Black Vulture	1	159	62	7	32	6
Turkey Vulture	—	26	79	28	80	35
Osprey	—	1	2	—	6	3
Mississippi Kite	94	—	—	—	—	—
Bald Eagle	—	—	1	—	—	—
Sharp-shinned Hawk	2	—	6	—	1	1
Cooper's Hawk	—	2	2	—	1	1
Northern Goshawk	—	—	—	—	—	1*
Red-shouldered Hawk	1	3	7	—	3	2
Broad-winged Hawk	2	2	4	—	4	11
Red-tailed Hawk	5	19	19	1	16	2
American Kestrel	2	20	21	—	7	11
Ruffed Grouse	—	—	—	—	1	2
Wild Turkey	2	7	—	—	—	1
Northern Bobwhite	8	44	22	12	33	15
Sora	2	8	11	—	—	1
American Coot	2	6	16	37	—	—
Black-bellied Plover	1	—	—	—	—	—
Semipalmated Plover	6	1	1	—	—	—
Killdeer	36	60	39	13	29	39
Black-necked Stilt	2	—	—	—	—	—
Greater Yellowlegs	1	—	8	—	1	—
Lesser Yellowlegs	16	6	28	2	16	2
Solitary Sandpiper	5	10	33	1	46	29
Willet	—	1	—	—	—	—
Spotted Sandpiper	7	16	10	—	10	20

TABLE 1. Continued.

	MEMP	COLU	NASH	HIGH	KNOX	ELI
Upland Sandpiper	—	—	1	—	—	—
Semipalm. Sandpiper	14	1	—	—	—	—
Least Sandpiper	54	25	9	—	—	5
Pectoral Sandpiper	65	7	1	—	2	—
Common Snipe	—	2	2	—	6	—
American Woodcock	—	1	2	—	—	1
Bonaparte's Gull	—	—	2	—	1	—
Ring-billed Gull	8	—	15	—	45	25
Herring Gull	—	—	—	—	1	—
Caspian Tern	1	—	—	—	—	—
Common Tern	11	—	—	—	—	—
Forster's Tern	6	—	1	—	—	—
Least Tern	4	—	—	—	—	—
Black Tern	8	—	—	—	—	—
Rock Dove	111	55	68	37	1879	228
Mourning Dove	41	70	87	110	542	152
Black-billed Cuckoo	1	—	2	—	—	2
Yellow-billed Cuckoo	10	20	3	—	—	14
Common Barn-Owl	—	—	—	—	—	3
Eastern Screech-Owl	2	9	3	—	3	9
Great Horned Owl	—	4	2	1	3	4
Barred Owl	2	8	15	—	1	3
Common Nighthawk	7	10	1	1	—	11
Chuck-will's-widow	—	14	2	3	1	8
Whip-poor-will	—	8	2	1	2	2
Chimney Swift	34	75	455	97	272	419
R.-thr. Hummingbird	12	9	9	6	3	9
Belted Kingfisher	3	10	6	1	16	12
Red-headed Woodpecker	17	6	12	2	—	—
Red-bel. Woodpecker	44	29	45	10	105	26
Yel.-bel. Sapsucker	1	1	—	2	—	—
Downy Woodpecker	19	35	23	9	33	32
Hairy Woodpecker	3	12	4	—	7	9
Northern Flicker	6	5	—	10	37	29
Pileated Woodpecker	12	18	14	3	22	24
Olive-sd. Flycatcher	—	—	1	—	—	—
Eastern Wood-Pewee	59	19	17	4	4	20
Acadian Flycatcher	86	18	5	2	2	16
Willow Flycatcher	—	1	—	—	—	1
Least Flycatcher	—	—	4	—	—	15
Eastern Phoebe	3	21	11	4	23	27
Great Cr. Flycatcher	40	11	23	—	20	12
Eastern Kingbird	27	59	80	21	24	19
Horned Lark	13	—	—	—	—	—
Purple Martin	81	39	52	59	22	340
Tree Swallow	11	4	24	10	—	5
N. Rough-wg. Swallow	39	64	106	4	43	97
Bank Swallow	1	—	26	—	—	—
Cliff Swallow	—	—	1204	5	—	—
Barn Swallow	184	73	81	262	235	249
Blue Jay	18	54	80	75	331	517
American Crow	14	40	68	78	241	175
Fish Crow	12	—	—	—	—	—

TABLE 1. Continued.

	MEMP	COLU	NASH	HIGH	KNOX	ELI
Northern Raven	—	—	—	—	—	7
Carolina Chickadee	42	31	75	16	155	75
Tufted Titmouse	102	47	62	32	134	116
Red-br. Nuthatch	—	—	—	1	2	4
White-br. Nuthatch	2	16	6	11	13	10
Brown Creeper	—	—	—	—	—	1
Carolina Wren	70	38	43	8	157	82
Bewick's Wren	—	6	—	—	—	—
House Wren	—	1	4	—	16	50
Winter Wren	—	—	—	—	1	7
Marsh Wren	—	1	2	—	—	—
Golden-cr. Kinglet	—	—	—	—	—	3
Ruby-cr. Kinglet	2	1	6	1	33	6
Blue-gr. Gnatcatcher	109	40	182	5	82	45
Eastern Bluebird	7	71	64	56	90	29
Veery	2	8	3	—	1	24
Gray-cheeked Thrush	5	6	1	4	2	1
Swainson's Thrush	31	8	29	1	7	1
Hermit Thrush	—	3	—	—	—	—
Wood Thrush	27	34	29	4	42	50
American Robin	35	110	111	260	488	517
Gray Catbird	2	17	11	12	20	65
Northern Mockingbird	22	32	49	55	158	82
Brown Thrasher	9	47	18	25	57	35
Water Pipit	—	—	1	—	6	12
Cedar Waxwing	—	16	58	2	109	78
Loggerhead Shrike	6	4	13	—	2	1
Eurasian Starling	125	75	194	190	708	712
White-eyed Vireo	41	46	13	—	41	28
Solitary Vireo	2	—	1	—	6	29
Yellow-thr. Vireo	8	4	9	1	11	11
Warbling Vireo	8	16	16	—	1	5
Philadelphia Vireo	—	1	—	—	2	—
Red-eyed Vireo	46	30	55	11	165	147
Blue-winged Warbler	1	11	25	—	12	—
Golden-winged Warbler	—	—	2	—	1	3
Tennessee Warbler	103	12	45	6	26	8
Orange-cr. Warbler	—	—	—	—	1	—
Nashville Warbler	3	1	8	—	14	1
Northern Parula	61	6	12	1	13	14
Yellow Warbler	3	17	37	4	15	47
Chestnut-sd. Warbler	6	4	4	3	9	47
Magnolia Warbler	1	1	—	—	3	1
Cape May Warbler	2	1	1	—	2	15
Bl.-thr. Bl. Warbler	—	—	—	—	2	43
Yellow-rumped Warbler	—	10	171	12	213	22
Bl.-thr. Gr. Warbler	8	2	16	2	41	32
Blackburnian Warbler	5	1	2	—	13	1
Yellow-thr. Warbler	3	15	2	1	3	7
Pine Warbler	—	2	1	—	4	2
Prairie Warbler	—	13	19	1	18	1
Palm Warbler	5	41	30	1	8	5
Bay-breasted Warbler	6	3	1	1	1	1

Table 1. Continued.

	MEMP	COLU	NASH	HIGH	KNOX	ELI
Blackpoll Warbler	11	4	3	—	1	1
Cerulean Warbler	9	11	9	—	47	1
Black & White Warbler	3	13	7	—	26	37
American Redstart	29	11	1	1	3	8
Prothonotary Warbler	36	12	32	2	3	—
Worm-eating Warbler	—	6	3	—	29	9
Swainson's Warbler	11	—	1	—	—	—
Ovenbird	3	14	4	—	32	90
Northern Waterthrush	1	6	10	1	2	6
La. Waterthrush	5	8	8	—	6	11
Kentucky Warbler	44	29	29	1	14	20
Common Yellowthroat	15	52	77	12	52	44
Hooded Warbler	5	10	7	1	36	55
Wilson's Warbler	1	—	—	—	—	2
Canada Warbler	1	—	—	—	—	18
Yellow-breasted Chat	5	29	24	2	13	26
Summer Tanager	58	25	15	2	13	4
Scarlet Tanager	8	27	31	—	53	48
Northern Cardinal	86	120	151	99	379	190
Rose-br. Grosbeak	11	15	21	3	35	19
Blue Grosbeak	4	6	7	2	3	4
Indigo Bunting	148	69	101	19	31	117
Painted Bunting	2	—	—	—	—	—
Dickcissel	64	7	—	1	—	1*
Rufous-sided Towhee	9	66	81	10	140	95
Chipping Sparrow	4	27	27	15	67	84
Field Sparrow	—	25	43	10	94	26
Savannah Sparrow	4	2	20	12	24	5
Grasshopper Sparrow	—	—	3	1	10	10
Sharp-tailed Sparrow	—	—	1*	—	—	—
Song Sparrow	—	1	7	8	163	264
Lincoln's Sparrow	1	1	1	—	—	—
Swamp Sparrow	—	5	30	—	7	1
White-thr. Sparrow	1	16	56	14	157	5
White-cr. Sparrow	2	6	4	1	4	2
Dark-eyed Junco	—	—	—	—	—	21
Bobolink	12	250	—	15	1	3
Red-winged Blackbird	287	171	250	168	213	219
Eastern Meadowlark	49	81	89	64	128	141
Rusty Blackbird	—	—	—	2	6	—
Common Grackle	146	180	198	230	400	486
Brown-headed Cowbird	148	90	134	176	213	65
Orchard Oriole	24	82	48	7	7	20
Northern Oriole	25	—	1	—	2	13
Purple Finch	—	1	—	—	3	—
House Finch	6	9	2	18	72	70
Pine Sisken	—	32	2	27	190	246
American Goldfinch	5	98	88	162	253	180
Evening Grosbeak	—	—	—	—	—	18
House Sparrow	37	68	42	118	152	168
Total species	144	150	164	101	148	150

* See Information on the Counts.

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IN MEMORIAM: EVELYN ELLIS AND JOHN ELLIS

Milbrey Dugger and Annella Creech
2835 Kenway Road, Nashville, Tennessee 37215

The Tennessee Ornithological Society lost two of its longtime members with the sudden deaths of John and Evelyn Ellis. They were drowned when trapped in their truck by the overflowing Harpeth River before daylight on 26 December 1987 as they began their annual Christmas Count. John and Evelyn will be missed by many but especially by members of the Nashville Chapter where they had been active members since 1960.

Both had many interests in the Nashville community. At First Baptist Church Evelyn had headed the church's college ministry for more than thirty years. John, a life deacon of the church, had also served as trustee for the Southern Baptist Foundation and as president of the Tennessee Baptist Association. Before her retirement Evelyn was office manager at Guaranty Mortgage Company. She had served as recording secretary of the Centennial Club and as a member of their Board of Directors.

In 1986 John received the Arthur Crownover Outstanding Citizen of Nashville Award, presented by the area Civitan Club, a group he had been active in for twenty-five years. He was a member of the Nashville Bar Association and worked thirty-three years in the Trust Department of Third National Bank. At the time of his retirement he was executive vice-president and head of the department.

The Ellises were dedicated supporters of the Nashville Symphony. The concerts on 22 and 23 January 1988 were dedicated to their memory as expressions of appreciation for the volunteer hours they had spent in helping the Symphony develop and grow into its present cultural asset for Nashville.

John, with much help from Evelyn, had served as president of the Nashville Chapter of TOS. At the time of his death he was TOS Vice-President for Middle Tennessee. John and Ev worked diligently in the field, fed birds consistently, and gave much of their time to TOS. Countless school children and members of garden clubs and gatherings in Middle Tennessee will remember them for their fascinating slide talks and movies about birds. John and Evelyn spent many patient hours in photography and preparation and gave their programs generously.

It is difficult for us to lose two dear friends at one time. They will be greatly missed.

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MINUTES OF THE 1988 TOS ANNUAL BOARD OF DIRECTORS AND BUSINESS MEETINGS

The 73rd Annual Meeting of the Tennessee Ornithological Society was held 29 April–1 May 1988 at the Tennessee Baptist Convention Center in Brentwood, Tennessee. President Stephen J. Stedman called the Board of Directors meeting to order at 1519 on 30 April. A quorum was present. The minutes of the 13–15 November 1987 meeting of the Board of Directors held in Lawrenceburg were approved as printed.

The VICE PRESIDENTS for East and West Tennessee had no reports.

The DIRECTORS-AT-LARGE for East and Middle Tennessee had no reports. West Tennessee DIRECTOR-AT-LARGE Donna Ward submitted a report on birdlife in west Tennessee.

The SECRETARY had no report.

TREASURER George Payne reported that from 12 November 1987–15 April 1988, the Society had income of $10,123.67, estimated liabilities of $9,600 and capital reserve of $35,498.50.

CURATOR James Tanner reported that during the November 1987–April 1988 period income from sales of back copies of *The Migrant* totalled $138 and that expenses during the same period totalled $12.07. This resulted in a net gain of $125.93.

EDITOR Charles Nicholson reported that the June and September 1987 issues of *The Migrant* had been mailed and that the December issue is to be mailed in about two weeks. The March 1988 issue is presently being typeset. All manuscripts recently received have been turned over to Editor-elect David Pitts.

NOMINATING Committee Chairperson Ronald Hoff nominated Barbara Finney for the position of President-elect and Dan Gray for the position of Middle Tennessee Vice President. Additional nominations were requested, but none was forthcoming.

FINANCE Committee Chairperson Richard Taylor discussed the TOS's MIT fund and speculated that possibly it could be better used if placed in another fund. He stated that, once the fund accumulates enough income to cover the cost of printing *The Migrant,* we should consider placing part of it into a Guaranteed Income Fund or a Bond Fund. A discussion then ensued as to when the value of the fund would be high enough to cover the costs of printing *The Migrant.* Treasurer George Payne stated the value of the fund would need to reach $60,000 or $70,000 before that could be accomplished.

BREEDING BIRD ATLAS Chairperson Charles Nicholson reported that the Committee met twice during the past year, and that some of the Regional Coordinator positions are changing. He stated that there is currently $1,300 in the Atlas Fund, and that a grant had been approved by the U.S. Forest Service for Atlas participants to do work in the Cherokee National Forest. A Bird Seed Sale is to be held in the major cities across Tennessee for the purpose of raising money for the Atlas project; Mr. Nicholson requested that the TOS Chapters should also become involved in this endeavor. In addition, The Atlas Committee unanimously endorsed the mid-level version of the proposed dues increase as it was published recently in the March 1988 issue of *The Tennessee Warbler.*

CERTIFICATION Committee Chairperson Charles Nicholson reported that the Committee had recently circulated and voted on documentations for a few species and that the March 1988 issue of *The Migrant* will have an article which will serve as an addendum to the official state list.

CONSERVATION/EDUCATION Chairperson Kenneth Dubke reported that seven phone calls have thus far been received as a result of the Common Barn-Owl posters distributed last fall. He also stated that he had submitted comments on behalf of the TOS in response to the Natchez Trace State Forest Management Plan. Another management plan is presently being considered for the Prentice Cooper State Forest. Comments were also recently sent by Mr. Dubke to the Corps of Engineers concerning the issue of river channelization.

The Tennessee Warbler EDITOR was absent.

FALL SYMPOSIUM DIRECTOR David Snyder reported that the Fall meeting and symposium will be held at the Land-Between-the-Lakes' Brandon Springs Group Camp in Stewart County on 18–20 November 1988. Lisa J. Petit, Ph.D. candidate in Zoology at the University of Arkansas, will be the guest speaker. Dr. Snyder also requested those interested in presenting papers at the fall meeting to contact him.

MEMBERSHIP DRIVE Chairperson Audrey Hoff reported that printing costs for the TOS flyers, remittance envelopes, mailing envelopes and invitation letters totalled $286.65; and that mailing costs totalled $31.79. The mailing was sent to former TOS members and Tennessee members of the Cornell Laboratory of Ornithology who are not already members of the TOS.

PATCHES AND DECALS Chairperson Susan Watson was absent and sent no report.

PUBLICITY Committee Chairperson Lil Dubke reported that the Committee is composed of representatives from each TOS chapter. A summary of the Membership/Publicity workshop held last fall was provided. Methods to improve publicity were proposed and included contacting the mass media (use of public service announcements); distributing a TOS brochure to libraries, museums, Chamber of Commerce offices, etc.; having each chapter prepare an exhibit that can be be displayed at various events; and having chapters create their own events to publicize the TOS (e.g., bird walks).

RARE BIRD ALERT Committee Chairperson David Chaffin reported that the purpose of the Rare Bird Alert (RBA) is not to solely serve those who like to chase and "list" rare birds; rather, it was designed to be available to all those who wish to use it and would incorporate topics of an educational nature (e.g., migration, behavior, breeding, peak numbers, and rare bird data). The Committee recommends that start-up costs of the RBA be shared equally between the TOS and RBA users so that once donations from RBA users have reached 50% of the start-up costs, then the TOS would match these donations with an equal amount. After the initial year, all costs would be borne by RBA users, who would donate to a special fund to cover the costs of the service. Everyone generally agreed that there should be an assessment of how many members would want to use the service before attempting to initiate it.

TENNESSEE ENVIRONMENTAL COUNCIL Representative Kenneth Dubke reported that Barbara Stedman attended the last meeting of the TEC in his absence and that more information on the proceedings of the TEC would be presented at the Fall meeting of the TOS.

Under Old Business, the matter of a dues increase began with a motion to bring this issue off the table. This motion was seconded and approved, but did not carry unanimously. The dues increase being proposed included the following increases in dues for the specified categories:

Membership Category	Proposed Dues	Current Dues
Student	$5.00	$3.00
Active	$10.00	$6.00
Family	$12.00	$7.00
Library	$15.00	$6.00
Sustaining	$20.00	$10.00
Life	$200.00	$150.00

It was estimated that this proposed dues increase would result in a surplus of $4,300 per year over current expenses. A discussion began, with arguments favoring a dues increase alternating with arguments opposing a dues increase. Charles Nicholson stated that additional money would be needed to fund the Atlas Project and that a dues increase would also help to cover the cost of publishing *The Migrant*. Jim Ferguson identified certain groups (e.g., low income families and "luke warm" members) who currently belong to the TOS but would be heavily impacted by a dues increase. He also stated that a dues increase would not be necessary if the cost of publishing *The Migrant* were reduced. Damien Simbeck stated that since the purpose of the TOS is to study the bird life of the state, then there should be some money readily available to fund the Atlas project as well as other special projects. George Mayfield cautioned that we should not approve anything which would cause a decrease in membership or the number of TOS Chapters. Audrey Hoff stated that the Atlas book will not be published solely from TOS funds; rather, the TOS will put up a certain amount of money to solicit matching funds from corporations. Lil Dubke said that senior citizens would be affected by a due increase; that 1989 should be the effective year for higher rates for new members; and that the Board should limit the amount that the TOS allocates to the Atlas project and seek matching funds from outside the TOS. After additional discussion, Dick Newton proposed an amendment to the dues increase motion which stipulated that a budget be created which specifies how the funds resulting from the dues increase would be allocated. This amendment was seconded and approved, and President Stedman directed that a budget be prepared for the Fall Meeting. A motion to postpone the orginial dues increase motion until a budget is prepared failed by a vote of 18 against and 15 for. The question for a vote on the dues increase was then moved, and this motion carried after which the original motion carried by a vote of 30 for and 12 against.

Under New Business, a motion to officially recognize a new TOS Chapter (to be called the Cumberland County Chapter and currently having 25 memberships) was seconded and approved. President Stedman then stated that Greg D. Jackson, President of the Alabama Ornithological Society, had asked about holding a joint meeting with the TOS at our fall meeting in Stewart County. A motion to invite the AOS to our Fall meeting was seconded and approved.

James Tanner, Chairperson of the Editorial Search Committee, nominated David Pitts to be Editor of the journal. A motion to accept, by acclamation, the nominees for President-elect, Middle Tennessee Vice President and *Migrant* editor (Barbara Finney, Dan Gray and David Pitts, respectively) was seconded and approved. A motion to recognize officially the fine job that Jim Ferguson did as President from 1985–1987 also carried.

Ruth Luckado reported that the National Guard had attempted to establish a tank training facility within the AEDC WMA and stated that the TOS should find out exactly what was happening there. A motion to endorse the bird seed sale (to raise money for the Atlas project) was seconded and carried.

The dates of the Fall 1988 meeting in Stewart County and the Spring 1989 meeting in Chattanooga were announced. President Stedman then stated that a new member was needed to serve on the Certification Committee by the Fall of 1988. After these announcements the meeting was adjourned.

ANNUAL MEETING

The 73rd Annual Meeting of the TOS was opened by Nashville Chapter President Kin Cosner at the banquet on 30 April. The evening of fellowship was dedicated to the memory of John Herbert, Evelyn Ellis, John Ellis, and Carol Knauth. Following the banquet, TOS President Stephen J. Stedman presided over the Business Meeting. Dr. Lawrence Walkinshaw was introduced as a special guest. Chapter recognition included the newly approved Cumberland County Chapter represented by its first president, Rodger Doxsey. Charles Nicholson presented the award for Mystery Species Identification (under the Breeding Bird Atlas Project) to Katherine Goodpasture. Ben B. Coffey, Jr. made a motion to raise the dues of the TOS effective for 1989; the motion was seconded and carried unanimously. Ronald D. Hoff made a motion to elect Barbara Finney as President-Elect, Dan Gray as Vice-President Middle Tennessee to replace John Ellis (deceased), and David Pitts as Editor of *The Migrant* to replace Charles Nicholson; the motion was seconded and carried unanimously. James Ferguson offered a resolution thanking Charles Nicholson for his work as editor of the journal; it was approved unanimously. Announcements included: (1) the Fall 1988 meeting on 18–20 November at Land-Between-the Lakes; (2) the Spring 1988 meeting at Chattanooga. Following the presentation of door prizes, the meeting was adjourned to the chapel where Dr. Jerome A. Jackson, Professor of Biological Sciences at Mississippi State University and TOS Life Member, presented a program entitled, "Cuba: Bird Conservation in a Forbidden Land."

John C. Robinson, Secretary

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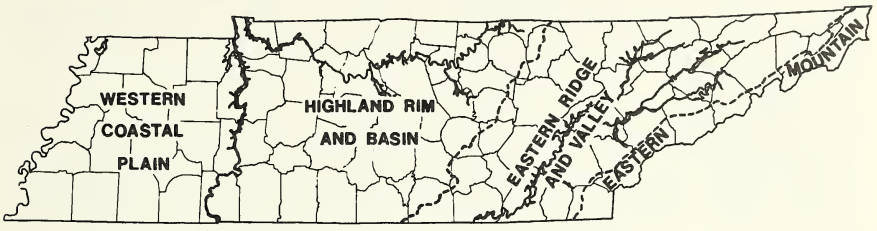
THE SEASON

JOHN C. ROBINSON, Editor



WINTER: 1 DECEMBER 1987–29 FEBRUARY 1988

The weather during this winter was uneventful across the state. Temperatures were near or slightly above normal at most localities, and most areas reported below normal amounts of precipitation.

Winter finches were well represented by Pine Siskins and by local populations of Evening Grosbeaks throughout middle and east Tennessee. Purple Finches appeared in lower than normal numbers. Several large concentrations of waterfowl and coots were noted in west and east Tennessee. A Northern Goshawk was reported from Shelby Co. and Red-necked Grebes were found again on Chickamauga Lake. Several species of passerines not usually observed in the winter were reported from across the state. The second and third state records of the Ross' Goose were reported from middle and west Tennessee, respectively.

Table 1 lists the results of the annual midwinter Bald Eagle survey. An unusually high number of eagles was found on the Watts Bar Lake count. This information was gathered by various agency personnel and TOS members between 4 and 14 January.

I wish to take this opportunity to encourage all Tennessee observers to submit ornithological field data to the appropriate regional compiler. A recent review of guidelines governing the submission of field records is provided by Stedman and Robinson (*Migrant* 58:65–79, 1987). The number of birds as well as the county in which those birds were seen should always be specified, especially for peak or maximum totals. When a very rare bird has been found, a Round Table Note should be prepared by the initial observer for timely publication in *The Migrant*. The initial observer should at least be willing to coauthor a Round Table Note on the sighting within a 3-year period following the date of the observation.—JOHN C. ROBINSON.

The following abbreviations are used: ad—adult; im—immature; EOP—end of period; max—maximum 1-day count during period; m. ob.—many observers; in.—inch; NWR—National Wildlife Refuge; WMA—Wildlife Management Area; CBC—Christmas Bird Count; WRRS—Winter Roadside Raptor Survey; RBRF—Rare Bird Reporting Form.

WESTERN COASTAL PLAIN REGION—The winter season produced some interesting and unusual species for west Tennessee, including Surf Scoter, Northern Goshawk and Long-eared Owl. Temperatures were seasonally moderate and precipitation was below normal. Common winter residents were down in numbers, signalling a depressed winter population count.

Table 1. 1988 Midwinter eagle survey.

	Bald Eagle			
	Adult	Imm.	Total	Golden Eagle
West Tennessee				
Reelfoot Lake	31	9	40	—
Open Lake	1	1	2	—
Pickwick Reservoir	—	3	3	—
Pickwick Tailwater	2	—	2	—
Kentucky Lake	25	40	65	2 ad, 2 im
Kentucky Lake (LBL)	10	8	18	1 unknown
Totals:	69	61	130	5
Middle Tennessee				
Cross Creeks NWR	3	—	3	—
Cheatham Res.	2	—	2	—
Cordell Hull Res.	2	1	3	—
Dale Hollow Res.	29	16	45	—
Cannon Co.	—	—	—	1 im
Totals:	36	17	53	1
East Tennessee				
Tansi Lake	2	—	2	—
Norris Res.	7	2	9	—
Cherokee Res.	—	1	1	—
Douglas Res.	2	1	3	—
Fort Loudon Res.	—	1	1	—
Watts Barr Res.	23	8	31	—
Chickamauga Res.	10	1	11	—
Nickajack Res.	2	1	3	—
Totals:	46	15	61	—
Grand totals:	151	93	244	6

Grebe–Gull: Pied-billed Grebe: 15 Jan (68) PAP (JCR), max. Horned Grebe: 21 Dec (65) PLS (JCR), max; 22 Dec (16) Savannah CBC (DJS); 24 Jan (46) PLS (DWB). Double-crested Cormorant: 21 Feb (27) Robco Lake, Shelby Co. (CHB, VBR). Greater White-fronted Goose: 25 Feb (10) BRF (JCR). Snow Goose: 25 Feb (335) BRF (JCR). ROSS' GOOSE: 25 Feb (3 ad) BRF (JCR), third state record, highest number in TN, first Henry Co. record. Canvasback: 10 Jan (233) PLS (DWB); 15 Jan (2002) PAP (JCR), max. SURF SCOTER: 18 Feb (1) Pickwick Dam, HDC (DJS). Common Goldeneye: 24 Jan (1204) PLS (JCR), second largest number recorded in state (3000 were reported on the 28 Dec 1964 Dyersburg CBC, *Migrant* 35:111). Bufflehead: 10 Jan (83) PLS (DWB). Osprey: 3 Dec (1) ESL (Dwight Miller, Jo L. Levy). Sharp-shinned Hawk: 22/28 Dec (1/1) HDC (SJS/DJS). Cooper's Hawk: 22 Dec (2) Savannah CBC (SJS, DJS). NORTHERN GOSHAWK: 18 Dec (1) PRI (VBR, MGW). "Harlan's" Red-tailed Hawk: 30 Jan (1) MNC (DJS). Golden Eagle: 28 Dec (1) BSU (JCR, RLK). Peregrine Falcon: 1–2/15 Dec (1/1) MEM (Patrick Casey, RPC/JRW). American Coot: 10 Jan (2544) PLS (DWB). Spotted Sandpiper: 22 Dec (1) REL (B. F. McCamey); 31 Jan–2 Feb (1) ESL (JRW). Least Sandpiper: 13, 22 Dec (9) BRF (JCR). Pectoral Sandpiper: 25 Feb (7) BRF (JCR), early. American Woodcock: 1 Mar (5) MEM (GRP).

Bonaparte's Gull: 6 Jan (120) PLS (DWB). Ring-billed Gull: 10 Jan (1300+) PLS (DWB). Herring Gull: 6 Jan (37) PLS (DWB).

Owl–Finch: LONG-EARED OWL: 13 Dec–24 Jan (1) West Sandy WMA, HNC (JCR, m. ob.). Common Nighthawk: 22 Dec (1) Forked Deer River Bottoms, MDC (RPF). American Crow: 16 Feb (500) Ashport, LDC, with 20,000 in roost across the MS River in MO (BBC, LCC). Fish Crow: 21 Dec (360) W and S of Fort Pillow State Farm, and (600) Ashport area (BBC, LCC, B. F. McCamey, H. R. Elphingstone); 16 Feb (175) E of Ashport, LDC (BBC, LCC). BLUE-GRAY GNATCATCHER: 22 Dec (1) Bruton Branch Recreational Area, HDC (DJS), second record for Savannah CBC and fifth CBC record for TN. Loggerhead Shrike: 31 Dec (16) OBC (JCR). Solitary Vireo: 20 Dec (1) MEM CBC (Diane P. Bean, DAD, MGW); 20 Jan (1) PEF (MGW, VBR). Orange-crowned Warbler: 11 Feb–EOP (1) MEM (VBR). Dickcissel: 27 Jan–1 Feb (1) MEM (Ray Wilson); 22 Feb (1 male) MEM (MGW). American Tree Sparrow: 16 Jan (1) W Tipton Co. (MGW). Vesper Sparrow: 22 Dec (1) S of Savannah, HDC, 30 Jan (approx. 30) S of Adamsville, MNC (DJS). Le Conte's Sparrow: 22 Dec (1) Pittsburgh Landing, HDC, 30 Jan (1) MNC (DJS). Lapland Longspur: 31 Dec (30) OBC (JCR). Brewer's Blackbird: 31 Dec (6) N of Gooch WMA, OBC (JCR). Purple Finch: Dec–Feb (rare to uncommon) MEM (BBC). House Finch: 22 Dec (1) N of Pickwick Dam, HDC (DJS); Dec–Feb (316 banded during 70% of the period) MEM (BBC). Pine Siskin: Dec–Feb (low numbers) MEM (BBC).

Locations: BRF—Britton Ford, Tennessee NWR, Henry Co.; BSU—Big Sandy Unit, Tennessee NWR, Henry Co.; ESL—Ensley Sewage Lagoons, Shelby Co.; HDC—Hardin Co.; HNC—Henry Co.; LDC—Lauderdale Co.; MDC—Madison Co.; MEM—Memphis; MNC—McNairy Co.; OBC—Obion Co.; PAP—Pace Point, Henry Co.; PEF—Shelby Co. Penal Farm; PLS—Paris Landing State Park, Henry Co.; PRI—President's Island, Shelby Co.; REL—Reelfoot Lake, Obion/Lake Co.

MARTHA G. WALDRON, 1626 Yorkshire Drive, Memphis, TN 38119.

HIGHLAND RIM AND BASIN REGION—The season's weather was close to normal. Two intense cold snaps occurred, in mid-December and early February; several inches of snow accompanied the latter. Rainfall at Nashville was 0.75 in. above normal during December (leaving a yearly shortfall of 18 in.), 0.65 in. below normal during January, and 2.01 in. below normal during February. Rainfall at Cross Creeks NWR was much more plentiful, as is generally the case along the Tennessee River, with 18+ in. falling during the period.

Christmas Bird Count (CBC) data again dominate the picture of birdlife generated by the information submitted, though fewer than the expected number of rarities occurred on the 11 regional CBCs. CBC data reveal the pattern of boreal invaders quite well this winter. Rough-legged Hawks, Red-breasted Nuthatches and American Tree Sparrows did not occur in invasion numbers, while finches came south in varying abundance. Purple Finches were below normal; House Finches were more abundant than ever before; Pine Siskins were above normal, as were American Goldfinches; Evening Grosbeaks were local, but present in moderately good numbers where reported.

CBC data also offer a means of following the population levels of birds of prey, as do the Winter Roadside Raptor Surveys (WRRS) conducted in the region. These two census methods, however, did not agree entirely about changes in abundance which occurred between this winter and the previous one; see the accounts of the diurnal raptors below for details.

The outstanding find of the season was the second Ross' Goose in Tennessee,

located, like the first bird, at Cross Creeks NWR (see Western Coastal Plain report for 3rd state record). This bird was more accomodating than the one seen at the refuge in November 1986, staying a month and allowing many to observe it, usually with Snow Geese present for good comparison.

The compiler thanks Ruth V. McMillan and Elizabeth C. O'Connor for assistance in analyzing the CBC data presented below, and all the cited and uncited, as well as excited, observers who submitted data, directly or indirectly, for the report.

Loon–Night-Heron: Common Loon: 2 Jan (38) Hickory-Priest CBC (*fide* CGD), max. Horned Grebe: 21 Feb (53) WDR (MDH, RWL), max. Double-crested Cormorant: 12/20 Dec (3) CCNWR—CBC on latter date (JCR/BHS, SJS); 19 Dec (1) Lebanon CBC (*fide* RVM); 19/26 Dec (1) WDR—CBC latter date (MDH, RWL/*fide* DJS); 18 Jan (1) CCNWR (JCR); only reports, but about the usual number. Black-crowned Night-Heron: 2 Jan (8) Hickory-Priest CBC (*fide* CGD), only report; however, on 30 Jan JPC and DTC counted 237 nests of this species on an island in Old Hickory Lake near GSP.

Swan–Goose: Tundra Swan: 16–29 Jan (1 im) CCNWR (JCR, DWB), only report. MUTE SWAN: 22–24 Jan/7 Feb (2 ad, 2 im) BAR (JCR/DWB); JCR raises the usual question about origin of these birds, when he points out that this family group, like other Mute Swans reported in the state, occurred during the likely migratory period of wild birds of this species; the TOS Certification Committee needs to reinvestigate the status of this species in Tennessee. Greater White-fronted Goose: 7 Feb (2) BAR (DWB), only acceptable report. Snow Goose: 19 Dec (1) WLC (*fide* RVM); 19 Dec (1) FKC (MDH, RWL); 20 Dec (6) BAR (DWB); 24 Dec (7) CCNWR (JCR, m. ob.); 24 Dec (1) PUC (SJS); this widespread minor incursion correlates well with the arrival of the next species listed below; 1 Jan (63) LWC (DJS, Michael A. Beuerlein); 1 Jan (75) CCNWR (JCR), max. ROSS' GOOSE: 23 Dec–24 Jan (1 ad) CCNWR (JCR, m. ob.), second state, regional, county and local record; excellent documentation (RBRF).

Teal–Merganser: Green-winged Teal: 1 Jan—EOP (5) ROB (DJS, m. ob.), rare winter species in LWC. Northern Pintail: 27 Feb (1 male) ROB (DJS, David C. Chaffin), rare anytime in LWC. Mallard × Northern Pintail (1, probably male) ROB (DJS). EURASIAN WIGEON: 2, 27, 30 Dec (1 male) CCNWR (JCR, DWB), continues a Fall 87 report. Canvasback: 24 Dec (250) CCNWR (JCR, DWB), max. Redhead: 26 Dec (13) Columbia CBC (*fide* DJS); 10–29 Jan (1–3) PUC (SJS); 16 Jan (9) CCNWR (DWB); 10, 17, 25 Feb (6) CCNWR (JCR); 29 Feb (6) PUC (SJS); only reports; all records of this species and the former should be submitted. Ring-necked Duck: 5 Jan (2000) CCNWR (JCR), max. Common Merganser: 7/10 Feb (1/10) near Granville, JAC (SJS, JWW/JWW); 14/28 Feb (2/20) CCNWR (JCR, DWB/JCR); only reports. Red-breasted Merganser: 17 Dec (14) LBL, SWC (DWB); only report.

Diurnal Raptors: Black Vulture: 11 Dec (240) GSP (DTC, JPC), max; down slightly from previous year on CBCs, but up 50% on WRRSs. Turkey Vulture: up greatly on CBCs, but up only slightly on WRRSs. Bald Eagle: Midwinter Eagle Survey data (Table 1) offer the best measurement of this species' status in the region; other reports earlier or later than this survey came in from the following counties: Bedford, Cheatham, Clay, DVC, DKC, Dickson, FKC, Houston, JAC, PIC, SMC, and Williamson. Northern Harrier: down about 30% on both CBCs and WRRSs; few reports not from these sources. Sharp-shinned Hawk: 7 non-CBC or -WRRS reports; down slightly from previous winter on CBCs, though still in good shape. Cooper's Hawk: 12 non-CBC or -WRRS reports; also down slightly

from previous winter on CBCs, but still in good numbers. Red-shouldered Hawk: dwon by 40% from previous year on CBCs; up slightly from previous year on WRRSs. Red-tailed Hawk: down 20% from previous winter on CBCs; down 10% on WRRSs. Rough-legged Hawk: present in normal (i.e., non-invasion) numbers; reported from LWC, MTC, PIC, RUC and WLC. Golden Eagle: 12 Dec, 6 Feb (1 im) CCNWR (JCR, Randall Grimsley, m. ob.); 4 Jan, 7 Feb (1 im) JAC (MCD, Candy Swan); 7 Feb (1 ad) BAR (DWB); 13 Feb (1 im) FKC (Jerry Ingles); only reports; see *Addenda.* Peregrine Falcon: 2 Jan (1) LWC CBC (DJS); 20 Feb (1) Brentwood, WMC (Christopher A. Sloan, Ann T. Tarbell); only convincing reports. Merlin: 30 Dec (1) SMC (RVM, Melissa A. Tucker); 2 Jan (1) LWC CBC (DJS); 16 Jan—EOP (1) PPL, DVC (F. Joseph McLaughlin, Robert Brayden, m. ob.); only reports. American Kestrel: down 35% on CBCs from very high level of previous winter but down only slightly on WRRSs.

Coot–Dunlin: American Coot: 10 Jan (1035) on Kentucky L., SWC, S of Rt. 79 bridge (DWB), max; low numbers on CBCs, continuing the trend begun in the early 1980's. Sandhill Crane: 6 Dec (56) PIC (RCH, JDH); 6 Dec (25) DKC (LB); 11 Dec (3) DRU (*fide* EB); 13 Dec (8) Coffee Co. (Lee W. Medley); 17 Dec (147) Cookeville, PUC, CBC (*fide* RWS); 20 Dec (8) CCNWR CBC (DWB); 21 Dec (5) RUC (TJW); 23 Dec (69) DKC (Michael Hawkins); obviously, an excellent late fall migration occurred, and 2 wintering records were submitted: 7 Jan (4) DRU (*fide* EB); 23 Jan (1) LWC (DJS, EC); only one spring record: 17 Feb (55) near Rickman, Overton Co. (RCH, JDH). Dunlin: 14 Dec (15) SWC (Annie H. Heilman, Ellen J. Walker), only report.

Barn-Owl–Nuthatch: Common Barn-Owl: 12 Dec (1) Clarksville, MTC (JCR); 2 Jan (2) LWC CBC (DJS, EC); only reports. Common Nighthawk: 12 Dec (1) WLC (LB), only report. Eastern Phoebe: 17 Dec (16) Cookeville, PUC, CBC (*fide* RWS), max; a total of 15 individuals of this species was seen on the remaining 10 regional CBCs. Horned Lark: good numbers reported from LWC, MTC, RUC, and SWC; fairly good numbers on CBCs. Red-breasted Nuthatch: low numbers on CBCs; few other reports.

Shrike–Warbler: Loggerhead Shrike: down 40% from high level of previous winter on CBCs and WRRSs. Orange-crowned Warbler: 2 Jan (1) LWC CBC (EC); only report; good details. Yellow-rumped Warbler: back up to normal numbers on CBCs after very low numbers of previous winter. Palm Warbler: 7 Dec–6 Jan (1) CCNWR—seen on CBC (JCR, m. ob.), rarely reported in winter.

Dickcissel–Blackbird: DICKCISSEL: 4 Jan (1) Gallatin, Sumner Co. (DTC, JPC), only report. American Tree Sparrow: 17/20 Dec (2/1) BAR/CCNWR CBC (DWB/BHS); 2 Jan (1) Hickory-Priest CBC (C. Kinian Cosner, Jr.); 24 Jan (2) SWC (DWB); 7 Feb (4) MTC (DWB); only reports; not an invasion winter. Chipping Sparrow: 9 Dec (1) LBL (DWB), only report. Vesper Sparrow: entire winter (up to 13) LWC (DJS, m. ob.), becoming more regular in LWC in winter; 12 Dec (1) CCNWR (JCR), only other report. Le Conte's Sparrow: entire winter (2) Center, LWC (DJS), continues a Fall 87 record. Lincoln's Sparrow: 2 Jan (2) LWC CBC (DJS, EC), only report. HARRIS' SPARROW: 2–6 Dec (1) Bear Creek Waterfowl Management Area, SWC (TJW, m. ob.), only report; very good documentation (RBRF). Lapland Longspur: 5 Dec (1) CCNWR (JCR); 24 Jan/7 Feb (1/2) BAR (JCR/ DWB), only reports. Dark-eyed Junco: two reports of "pink-sided" forms, from LWC and PUC. Brewer's Blackbird: entire winter (up to 107) LWC (DJS, m. ob.), becoming more and more regular in winter in LWC; rumors of this species elsewhere were not substantiated by convincing—or in some cases ANY—documentation.

Cardueline Finches: Purple Finch: less common than normal; was recorded in

lower numbers of birds/100 party hr than in 16 of previous 21 winters on CBCs. House Finch: continues expansion; seen in greater numbers of birds/100 party hr on CBCs than ever before. Pine Siskin: more common than normal; reported in greater numbers of birds/100 party hr than on all but 6 of previous 21 CBCs (see *Addenda*). American Goldfinch: more common than normal; seen in greater numbers of birds/100 party hr than on all but 6 of previous 21 CBCs. Evening Grosbeak: very localized, but seemingly in higher than normal numbers where present.

Addenda—Golden Eagle: 8 Jan 1983 (1 im) JAC (MCD, Donald Norris); 4 Dec 1986 (1 im) JAC/Macon Co. line near Wartrace Creek (MCD). Pine Siskin: one banded (band # 1700-65555) 18 Jan 1986 in Williamsport, Maury Co., by Katherine A. Goodpasture was recovered on 19 May 1986 at Clarksburg, Quebec; few recoveries of this species are reported.

Locations: BAR—Barkley WMA, Stewart Co.; CCNWR—Cross Creeks NWR, Stewart Co.; DKC—DeKalb Co.; DRU—Duck River Unit, Tennessee NWR, Humphreys Co.; DVC—Davidson Co.; FKC—Franklin Co.; GSP—Gallatin Steam Plant, Sumner Co.; JAC—Jackson Co.; LBL—Land-Between-the Lakes, Stewart Co.; LWC—Lawrence Co.; MTC—Montgomery Co.; PIC—Pickett Co.; PPL—Percy Priest Lake, Davidson, Rutherford and Wilson Cos.; PUC—Putnam Co.; ROB—Robertson Pond, Lawrence Co.; RUC—Rutherford Co.; SMC—Smith Co.; SWC—Stewart Co.; WDR—Woods Reservoir, Coffee and Franklin Cos.; WLC—Wilson Co.

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EASTERN RIDGE AND VALLEY REGION—For the most part this was a mild winter. Temperatures during December and February were slightly above average, while January was somewhat colder than normal. Precipitation totals were 15–20% below normal for the season at most places. A TVA press release in March stated that, "Since the drought began in 1984, average rainfall in the Tennessee Valley is about 55 in. below normal—representing more than a normal year of rain that did not fall." The only significant snowfall of the season occurred in unusual fashion on 7–8 January: twice as much snow accumulated in Chattanooga as in Johnson City, completely opposite the usual pattern. Chattanooga received 8–10 in. (the most since 11 in. in 1927), Knoxville got 6 in., and Johnson City saw 4–5 in. Several days of very cold temperatures permitted the snow cover to remain longer than normal. No adverse effects of this were reported. In the Chattanooga area, "Particular attention was paid for any losses to the bluebird population; however, they seemed to have survived in good shape." In the Johnson City/Greeneville area the bluebird population remained low, not having recovered from the crippling blow dealt by the snowstorm of April 1987; but no further losses were detected.

The highlight of the season was the major invasion of Pine Siskins. However, they were not accompanied in numbers by the other boreal visitors—only a few scattered Red-breasted Nuthatches and Evening Grosbeaks were present (Purple Finches are more regular). A few "half-hardy" species lingered or wintered, most notably Sandhill Crane, Orange-crowned and Cape May Warblers. Although much of this winter was mild, a cold late fall was not conducive to lingering. Most unexpected were the Red-necked Grebes (up to 6) on Chickamauga Lake; but then again maybe not, considering the number of records from that location. Other interesting observations are included in the text of this report.

Loon–Heron: Common Loon: 14 Feb (8) Tellico Lake, Monroe Co. (JAK); thru 1 Jan (2) BOL (RLK); 13 Dec (10) CHL (KHD, LHD), max. Horned Grebe: 16 Jan (130) CHL (KHD, LHD), max. RED-NECKED GREBE: 12–27 Feb (1–6) CHL (RLK, LHD, then m. ob.), about 14th state record, 5th CHL record and highest number ever recorded in the state. Double-crested Cormorant: 5, 13 Dec (5, 2) CHL (KHD, LHD); 6 Dec (5) FLL (JAK); 29 Dec (1) BOL (RLK). Green-backed Heron: 19 Dec (1) NOR CBC (Boyd Sharp). Black-crowned Night-Heron: small numbers present at FLL, DOL and KPT (m. ob.).

Waterfowl: Greater White-fronted Goose: 17 Feb (4) HRA (TJW). Snow Goose: 13/27 Jan (4 white/1 wh, 3 blue) HRA, 13 Jan/17 Feb (2 wh) WBL, 28 Jan (1 wh) CRL, 25 Feb (1 wh) UHR—all by TWRA; Dec into Feb (3 wh) Tusculum, GNC (Margaret and King Gaut); 13 Jan (2 wh) Nolichuckey River, GNC (PHB); above average number of reports. Canada Goose: 5 Jan (1376) UHR, 27 Jan (1156) HRA (TWRA), max. Green-winged Teal: 28 Jan (75) DOL (TWRA), max. American Black Duck: 17 Feb (878) HRA, 5 Jan (625) UHR (TWRA), max. Mallard: 16 Jan (3000) HRA (KHD, LHD), max. Northern Pintail: 16 Jan (10) HRA (KHD, LHD), max. Northern Shoveler: 13 Jan (23) HRA (TWRA), max; 20–27 Jan (1) JNC (BC, *et al.*), seldom seen there in midwinter. Gadwall: 13 Dec (300) CHL (KHD, LHD), max. American Wigeon: 28 Jan (75) DOL (TWRA), max. Canvasback: 12/13 Dec (1/2) HRA/CHL (KHD, LHD). Redhead: 20–27 Jan (4–1) JNC (BC, *et al.*). Ring-necked Duck: 5 Jan (350) UHR (TWRA), max. Greater Scaup: 16 Jan (285) CHL (KHD, LHD, *et al.*), max. Scaup sp.: 11 Dec (432) UHR (TWRA), max. White-winged Scoter: 20 Feb—EOP (1–2) CHL (KHD, LHD, *et al.*). Common Goldeneye: 28 Jan (281) CRL (TWRA), max. Hooded Merganser: 11 Dec (57) CRL (TWRA), max. Common Merganser: 20–29 Jan (10) BOL (BC, RLK, *et al.*); 28 Jan (3) CRL (TWRA); only reports. Ruddy Duck: 24 Jan (202) CHL (KHD, LHD), max.

Eagle–Crane: Bald Eagle: 28 Jan (1 ad) UHR (TWRA); 7 Feb (1 ad, 1 im) Raccoon Mountain Pumped Storage Station, Marion Co. (RJH); none in the JNC area (*fide* RLK); no other reports. Northern Harrier: none in JNC area (*fide* GDE); no other reports. Sharp-shinned/Cooper's Hawks: 5/4 reports in JNC area (*fide* GDE); 1/3 reports in GNC (PHB, DJN); only reports. Red-shouldered Hawk: 1–16 Jan (1) JNC (JWB, *et al.*), seldom seen there in midwinter. Rough-legged Hawk: 29 Jan (1 dark phase) Stockton, Fentress Co. (RCH), only report. Golden Eagle: 6 Feb (1 im) HRA (William H. Chipley); hacking projects in Georgia and North Carolina may account for some of the recent CHA area reports (*fide* KHD). Merlin: 17 Dec (1) McMinn Co. Airport (Paul G. Mascuch); 28 Feb (1) Soddy, HLC (AMJ). Peregrine Falcon: 13 Dec (1 ad) CHL (KHD, LHD). American Coot: 13 Dec (3000) CHL (KHD, LHD), max. Sandhill Crane: last southward migrants were 8 Dec (16) Crossville, Cumberland Co. (Bruce F. Anderson) and 2–12 Dec (60) HRA (J. Craig Watson, Carl W. Campbell, KHD); about 15 wintered at HRA (*fide* KHD); first northward spring migrants appeared 16 Feb at SAB (LHD).

Killdeer–Woodpecker: Killdeer: 2 Jan (525) HRA (KHD, LHD), max. Least Sandpiper: 2–10/5–9 wintered at HRA/SAB (KHD, LHD). Dunlin: up to 100 wintered at HRA (KHD). Common Snipe: 21 Feb (52) SAB (KHD, LHD), max. American Woodcock: 31 Dec (1 flushed) Kinser Park, GNC (PHB, Orland R. Britton); 21 Feb—EOP (1 heard) SAB (KHD); 25 Feb—EOP (2 heard) GNC (Richard & Willie Ruth Nevius); 29 Feb (3 heard) Austin Springs, WGC (RLK). Bonaparte's Gull: up to 105 regular on CHL (KHD, LHD, *et. al.*), above average number; 1–3 Jan (2–3) BOL (RLK, JWB). Ring-billed Gull: wintering populations of 600 on lower CRL, 400 on DOL, and 1000+ on FLL (JAK, CPN, *et. al.*); during heavy rains in late Dec several flocks of up to 235 reported from grassy

fields in Knox Co. (JBO, ARH), presumably foraging on earthworms (CPN); 27 Jan (360) BOL (RLK), about 3 times average wintering number there. Herring Gull: 27 Jan (1) BOL (RLK), only report there. Common Barn-Owl: 21 Feb (1) Rader, GNC (DJN). Red-headed Woodpecker: 19 Dec (2) NOR CBC (ARH); 20 Dec (1) KNX CBC (*fide* CPN); 6 Jan (1) SPW (GWM); only reports.

Lark–Shrike: Horned Lark: 10 Jan (200/50) GNC/ Hamblen Co. (JAK); 26 Jan (2 flocks of 30 and 50 birds) JNB (RLK). Purple Martin: 29 Feb (1) Anderson Co. (*fide* JBO), first arrival. Red-breasted Nuthatch: NOR CBC (4); HRA CBC (2, only CHA area report) (*fide* KHD); KPT CBC (6) (RLK); scarce. House Wren: 18 Dec (1) CHA (RJH). Marsh Wren: 11 Dec (1) CHA (RJH). American Robin: 1 Jan (3000+) SPW (GWM), max. Gray Catbird: 11 Dec (1) CHA (RJH). Brown Thrasher: no reports in the JNC area (*fide* GDE). Water Pipit: present in lower than average numbers in KNX and CHA areas (*fide* CPN, KHD); 15 Jan (40) JNB (RLK), only report there. Cedar Waxwing: present in above average numbers in KNX, GNC, and JNC areas (*fide* CPN, PHB, GDE); 23 Dec (350) NOR (CPN), max. Loggerhead Shrike: 2 reports from GNC (DJN); 18 Dec (7) WGC WRRS, a high count for that area, but only 1 on same route on 16 Jan (RLK).

Warbler–Grosbeak: Orange-crowned Warbler: 15 Jan–27 Feb (1) KNX (Louise F. Fuller), third consecutive winter at feeder. Cape May Warbler: 7 Jan (1) Hixson, HLC (AMJ), at feeder during snowstorm, first CHA area winter record. Pine Warbler: 3 Feb (4 singing) NOR (CPN). Palm Warbler: 1 Feb (1) Blount Co. (JAK). Vesper Sparrow: 18 Jan (1) SPW (GWM), only report. Fox Sparrow: 19 Dec (6) NOR CBC, high count there, but none on KNX CBC (*fide* CPN); 21 Jan (10) Conklin, WGC (RLK, BC), a high number for JNC area. White-crowned Sparrow: above average numbers in JNC area (*fide* RLK). Rusty Blackbird: more reports than normal in KNX area: 19 Dec (151) NOR CBC (*fide* CPN), max; but only 1 report in JNC area (*fide* GDE). Purple Finch: small numbers in CHA area (*fide* KHD); moderate to good numbers in KNX area; 19 Dec (159) NOR CBC (*fide* CPN), max; small numbers in GNC area (*fide* PHB); moderate numbers in JNC area (*fide* GDE). House Finch: widespread and numerous. Pine Siskin: a major invasion—many reports of flocks of 100–300 birds from all parts of the region throughout the period (m. ob.). Evening Grosbeak: a few small flocks (1–10 birds) at Signal Mountain, HLC (Jonnie Sue Lyons), Sewanee, Franklin Co. (Jerry Ingles), and KNX area (*fide* JBO); none in GNC and JNC (*fide* PHB, GDE).

Locations: BOL—Boone Lake, Sullivan and Washington Cos.; CHA—Chattanooga; CHL—Chickamauga Lake, Hamilton Co. portion; CRL—Cherokee Lake, Grainger, Hamblen and Hawkins Cos.; DOL—Douglas Lake, primarily Jefferson Co.; FLL—Fort Loudon Lake, Blount, Knox and Loudon Cos.; GNC—Greene Co.; HLC—Hamilton Co.; HRA—Hiwassee River Area, primarily Meigs Co., but also Bradley, McMinn, and Rhea Cos.; JNB—Jonesborough, Washington Co.; JNC—Johnson City; KNX—Knoxville; KPT—Kingsport; NOR—Norris, Anderson Co.; SAB—Savannah Bay, Hamilton Co.; SPW—Speedwell, Claiborne Co.; UHR—Upper Holston River, Hawkins Co.; WBL—Watts Bar Lake, Meigs, Rhea and Roane Cos.; WGC—Washington Co.

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EASTERN MOUNTAIN REGION—The weather picture continues the dry conditions our area has seen for the past three years. Below average precipitation totals were recorded for December, January and February. December ended up 1987 with a yearly deficit of almost 6 in. January and February were both below average, starting out seemingly another dry year. The only snowfall of any sig-

nificance came on the 7th of January when we recorded a total of 6 in. Overall, however, our winter period was one of the mildest we have seen in many years.

The birding observations were about as mild as the weather. Unusual sightings included Blue-winged Teal and Gray Catbird on the Roan Mountain CBC. The Eastern Bluebird population remains noticeably low following the snowstorm mortality of April 1987 (*Migrant* 58:106). The Pine Siskin was widespread, occurring in large flocks throughout the region beginning in early November; most feeder operators are calling it one of the biggest nuisance birds that has dominated their feeders in a long time.

Loon–Hawk: Common Loon: 19 Dec–6 Jan (1–2) WTL (RLK). RED-THROATED LOON: 19 Dec (1) WTL (FJA, CS). Horned Grebe: 19 Dec (2) WTL (GDE, HHF); 6 Jan (1) WTL (RLK). Canada Goose: thru EOP (35–40) Watauga River, Carter Co. (LHTOS). Wood Duck: 20 Dec (6) Ripshin Lake (FJA, CS); 20 Feb (2) RZF (CFW). BLUE-WINGED TEAL: 20 Dec (6) Ripshin Lake (FJA, CS), extremely rare in winter in our area. Hooded Merganser: 6 Dec–28 Feb (3–6) Ripshin Lake (LHTOS). Red-breasted Merganser: 4 Dec (4) WIL (JWB). Ruddy Duck: 2 Jan (3) SHL (JWC, Bert Hale). BALD EAGLE: 23 Jan (1 ad) RNC (EHS); 19 Feb (1 im) SHL (JWC). Sharp-shinned and Cooper's Hawks: number of submitted reports lower than usual. Red-shouldered Hawk: 19 Dec (1) RNC (SG, GWS, RPL).

Gull–Shrike: Herring Gull: 4 Dec (1) WTL (BC), only report. Great Horned Owl: 19 Dec (4) ELI CBC (LHTOS); 2 Jan (2) SHL (RPL). Barred Owl: 19 Dec (1) Holston Mountain (RLK). Red-headed Woodpecker: 19 Dec (1) RZF (GDE, HHF), only report. Red-breasted Nuthatch: numerous on RNM at high elevations all period. Eastern Bluebird: still very low overall numbers (see introductory comments). Hermit Thrush: more than the average number of reports were submitted. GRAY CATBIRD: 20 Dec (1) Roan Mountain Village, Carter Co. (FJA, CS), rare in winter. Cedar Waxwing: heavy influx into the region noted in Jan and Feb, with several flocks numbering 50–100 birds. Loggerhead Shrike: 19 Dec (2) Siam Valley, Carter Co. (GOW, CFW).

Sparrow–Grosbeak: Fox Sparrow: no reports submitted?? Rusty Blackbird: 25 Jan (4) ELI (Barbara Walsh). Purple Finch: lower than average numbers this period. House Finch: populations continue to increase each season. Red Crossbill: 19 Dec (25) Dennis Cove, Carter Co. (FJA, CS); 19 Dec (8) Cove Ridge, Johnson Co. (SG, GWS, RPL). Pine Siskin: most definitely the bird of the winter; from late fall thru EOP these birds dominated all feeders in the area with several flocks of 300–400 birds reported. Evening Grosbeak: 19 Dec–7 Feb (7–25) at high elevations only on RNM (LHTOS).

Locations: ELI—Elizabethton; RNC—Roans Creek, Johnson Co.; RNM—Roan Mountain; RZF—Razor Farm, Carter Co.; SHL—South Holston Lake area, Sullivan Co.; WTL—Watauga Lake; WIL—Wilbur Lake, Carter Co.

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OBSERVERS

FJA—Fred J. Alsop
DWB—Donald W. Blunk
LB—Linda Bowman
EB—Ed Britton
PHB—Phine H. Britton
JWB—James W. Brooks
CHB—Carolyn H. Bullock
RPC—Robert P. Casey
BBC—Ben B. Coffey, Jr.
JWC—J. Wallace Coffey
LCC—Lula C. Coffey
DTC—Dot T. Crawford
JPC—J. Paul Crawford
BC—Brian Cross
EC—Ed Crouch, Jr.
DAD—Dollyann Daily
MCD—Michael C. DeFosche
CGD—C. Gerald Drewry, Jr.
KHD—Kenneth H. Dubke
LHD—Lillian H. Dubke
GDE—Glen D. Eller
HHF—Harry H. Farthing
RPF—Robert P. Ford
SG—Sally Goodin
JDH—J. David Hassler
RCH—Robbie C. Hassler
RJH—R. John Henderson
MDH—Marguerite D. Hernadez
ARH—Audrey R. Hoff
LHTOS—Lee R. Herndon Chapter, TOS
AMJ—Albert M. Jenkins
RLK—Richard L. Knight
JAK—Jon A. Koella
RPL—Richard P. Lewis
RWL—Ruth W. Luckado
GWM—George W. McKinney
RVM—Ruth V. McMillan
CPN—Charles P. Nicholson
DJN—Daniel J. Nieves
JBO—J. B. Owen
GRP—George R. Payne
VBR—Virginia B. Reynolds
JCR—John C. Robinson
EHS—Edward H. Schell
DJS—Damien J. Simbeck
RWS—Richard W. Simmers, Jr.
BHS—Barbara H. Stedman
SJS—Stephen J. Stedman
CS—Cathi Sullins
GWS—Glenn W. Swofford
JWW—Joseph W. Wahl
MGW—Martha G. Waldron
GOW—Gary O. Wallace
CFW—C. Frank Ward
JRW—Jeff R. Wilson
TJW—Terry J. Witt
TWRA—Tennessee Wildlife Resources Agency

INSTRUCTIONS TO AUTHORS

The Migrant records observations and studies of birds in Tennessee and adjacent areas. Most articles are written by members of the Tennessee Ornithological Society.

SUBMISSIONS: The original and, if feasible, two copies of the manuscript should be sent to the Editor: T. David Pitts, Biology Department, University of Tennessee at Martin, Martin, TN 38238. Manuscripts that have been published in other journals should not be submitted.

MATERIAL: The subject matter should relate to some phase of Tennessee ornithology. It should be original, factual, concise, and scientifically accurate.

STYLE: Both articles and short notes are solicited; recent issues of The Migrant should be used as a guide in the preparation of manuscripts. Where more detail is needed, reference should be made to the *Style Manual for Biological Journals*; this book is available at many public libraries and from the American Institute of Biological Sciences, 1401 Wilson Boulevard, Arlington, VA 22209.

COPY: Manuscripts should be typed *double spaced* on 8.5 × 11″ paper with adequate margins for editorial notations. Tables should be prepared on separate sheets with appropriate title and column headings. Photographs intended for reproduction should be sharp with good contrast on glossy white paper; black and white photographs will usually reproduce better than color photographs. Weights, measurements, and distances should be in metric units. Dates should be in "continental" form (e.g., 16 March 1968). Use the 24-hour clock (e.g., 0500 or 1900).

NOMENCLATURE: The common and scientific names of a species should be given the first time it is mentioned. The scientific name should be underlined. Names should follow the A.O.U. Check-list of North American Birds (1983 edition or subsequent supplements).

TITLE: The title should be concise, specific, and descriptive.

ABSTRACT: Manuscripts of five or more typed pages should include an abstract. The abstract should be less than 5% of the length of the manuscript. It should include a brief explanation of why the research was done, the major results, and why the results are important.

LITERATURE CITED: List all literature citations in a Literature Cited section at the end of the text. Text citations should include the author and year.

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CHANGING RANGES OF BIRDS IN TENNESSEE

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The abundant information on birds in Tennessee, mostly published in *The Migrant,* makes possible this study of species that have expanded their ranges in the last 150 years, or that have decreased and even disappeared. Twenty-six species have spread into new nesting or wintering ranges, and nine have definitely decreased in range.

Citations to published records are in two forms. Because of the large number of records in *The Migrant,* I have abbreviated most of these to just the volume and page numbers; e.g., (56:63) means that the record was published in Volume 56, page 63, of *The Migrant.* Citations to other journals and to books are given in full, as are those to articles in *The Migrant* which summarize or describe changes in birds' ranges. The common names of species are the standardized names in the sixth edition of the check-list published by the American Ornithologists' Union (1983).

EXPANDING RANGES

Twenty-six species have obviously expanded their ranges in Tennessee since ornithological records have been kept; these are described below. There are a few others, including Double-crested Cormorant, Little Blue Heron, and Savannah Sparrow, which are apparently becoming established as breeding birds in new areas, but these changes are so recent or erratic that they have been omitted.

ANHINGA—The records of nesting Anhingas in Tennessee demonstrate a history of disappearance followed by recovery with a few appearances in new localities. Rhoads (1895) mentions their presence at Reelfoot Lake but does not report nests. However, the birds probably nested there for many years because in 1932 an estimated fifty nests were found in "Cranetown" at Reelfoot (Ganier 1933b). After 1942 there were no known nestings there until 1977, when one nest was found (53:63), and then another gap occurred until one nest was found in 1985 (56:46), followed by a single nest in 1986 and another in 1987 (Pullin 1980–1988). Outside of the Reelfoot area a single nesting occurred at the Tennessee National Wildlife Refuge near Waverly in 1953 (26:9). Anhingas were observed in the breeding season in McNairy County in 1980 (51:91) and in Lauderdale County in 1986 (57:102). Since 1950, therefore, Anhingas have nested, or were present in the nesting season, in four scattered localities in West Tennessee.

GREAT BLUE HERON—Prior to 1919 Great Blue Herons were reported to be rarely present at scattered locations in the state, both in winter and summer, but were not known to nest. The earliest known heronry was at "Cranetown" in Reelfoot Lake, beginning in 1919. The histories of this colony and of some others in Tennessee were summarized by Ganier (1933b, 1951), by Gersbacher (1939, 1964), and by Pitts (1973, 1977, 1982, 1985). The location of Reelfoot heronries has occasionally shifted, but apparently at least one colony has been present in the area since 1919. Between 1980 and 1987 the Reelfoot heronry doubled in size to about 350 active nests (Pullin 1980–1988).

Between 1926 and 1960 new colonies were established in four different counties in or bordering West Tennessee; in chronological order they are Hardin in 1926, Henry in 1936, Humphreys (in the Tennessee National Wildlife Refuge, Duck River Unit) in about 1940, and Weakley in the 1950's. Between 1981 and 1985 several colonies were established along the tributaries of the Obion River in Weakley, Henry, and Carroll Counties; several of these lasted only a few years (Pullin 1980–1988). The most recently discovered heronry in this general area was found in 1986 in Benton County (57:102). In 1985 and 1986 two small colonies were found in Lauderdale County near the Mississippi River (Pullin 1980–1988); their recent history is not clear.

A big range extension for nesting Great Blue Herons began about 1965 when a heronry was discovered near Tullahoma in Coffee County and another a year later on the eastern Tennessee River in Meigs County (Pitts 1977). These birds probably spread from some large heronries along the Tennessee River in northern Alabama. By 1983 the one in Meigs County, at Armstrong Bend, had grown to be the largest in Tennessee. From here nesting herons spread north and south along the Tennessee River until by 1988 there were fifteen colonies between Blount County and Chattanooga (Pullin 1980–1988, J. B. Owen, pers. comm.).

In about seventy years Great Blue Herons have formed new nesting colonies in all sections of the state. In 1987 the Tennessee Valley Authority's survey of nesting herons (Pullin 1980–1988) reported nine active colonies in West Tennessee, including Duck River, with a total of about 900 active nests, one colony near Tullahoma with about 200 active nests, and fourteen colonies along the southern half of the eastern Tennessee River with about 1,000 nests. One result of this growth has been a marked increase in wintering Great Blue Herons in Tennessee (Tanner 1985).

CATTLE EGRET—This native of Africa and southern Asia first appeared in the United States in Florida, in 1941 or 1942 (Telfair 1983). The first record in Tennessee was of one bird in Anderson County in May 1961 (32:35), and the second was almost exactly a year later at Columbia (33:48). After that these egrets were observed at irregular intervals and scattered locations. By 1970 they had reached all but the northern counties of Middle and East Tennessee, and by 1978 they had been observed in all parts of the state except the eastern mountains.

The numbers of Cattle Egrets reported on Spring Field Days (made in late April or early May) increased from year to year most rapidly in West Tennessee and most slowly in East Tennessee (Tanner 1986). Fall records have increased in recent years, and the first of these birds on a Christmas Count was in 1984 at Reelfoot Lake (56:9).

Cattle Egrets have been known to nest in only five areas in the state: at Dyersburg in West Tennessee from 1964 through 1969 (Pitts 1977), on Cherokee Lake in East Tennessee from 1975 (Pitts 1977) through 1984 (Pullin 1980–1988), at Hales Point, Lauderdale County, in 1985 (Pullin 1980–1988), and in 1987 in Stewart and Sumner Counties (58:139).

These egrets have spread across Tennessee in less than twenty years. The general trend of increasing numbers was from west to east.

BLACK-CROWNED NIGHT-HERON—There are no records of nesting Black-crowned Night-Herons in Tennessee prior to 1900. The oldest colony in the state was established about 1908 near Bordeaux, Davidson County (Pitts 1973), and is still extant. A few of these herons nested at Reelfoot Lake in 1933, 1934, 1938, and 1964, with none known since then (Pitts 1985). Two nests were found near Ridgley, Lake County, in 1950 (Ganier 1951).

The real range expansion began in East Tennessee about 1950. In 1952 a small colony was found in Blount County (Howell and Monroe 1957). Fourteen years passed before a second colony was observed a few miles from the first, in 1966 in Knox County; then new colonies appeared in 1972 in Hawkins County and in 1974 on Cherokee Lake in Grainger County (Pitts 1977). Between 1974 and 1986 colonies were established in Sevier County (48:42; 57:113), and in Loudon, Monroe, and Roane Counties (Pullin 1980–1988). Some of these colonies persisted only a few years.

A second nesting site in Middle Tennessee was found in 1975 on Old Hickory Lake in Sumner County (Pitts 1977).

In 1985 the number of nesting Black-crowned Night-Herons was highest in East Tennessee and lowest, perhaps none, in West Tennessee. The expansion of colonies has resulted in a noticeable increase in the number of these herons seen in winter (Tanner 1985).

YELLOW-CROWNED NIGHT-HERON—The earliest recorded nests in Tennessee of this night-heron were near the western Tennessee River just north of the Mississippi state line: in Hardin County in 1926 (Ganier 1951) and in Hardeman and McNairy Counties in 1939 (Calhoun 1941). From this area the range seemed to expand erratically to at least twelve localities in West and Middle Tennessee. Mentioning only the extremes, nestings were reported from Reelfoot Lake in 1942 (Ganier 1951), but from Memphis not until 1970 (41:57); first nests at Nashville were found in 1949 (Ganier 1951), at Tennessee National Wildlife Refuge in 1966 (letter from J. H. Burbank), and in Rutherford County in 1982 (56:13).

In East Tennessee the first nestings were at Chattanooga in 1967 (38:66). The known nesting range then expanded northeastward up the Tennessee River valley as nests were found in Blount County in 1974 (49:81), in Sevier County in 1978 (49:93), and in Carter County in 1979 (50:71).

Besides the nesting reports summarized above, there have been many observations of adult and immature Yellow-crowned Night-Herons present during the summer at scattered localities in the state. Since these birds are both nocturnal and quiet and they build inconspicuous nests, the above account of their range expansion is undoubtedly incomplete.

CANADA GOOSE—Canada Geese nested regularly at Reelfoot Lake for an unknown period before 1900 (Pindar 1886, Rhoads 1895); Ganier (1933b) did not find any records of nesting after that date.

At a pond in Greene County in 1953 a pair including a crippled bird nested successfully (34:35–36) and started a resident flock that persisted for several years; Canada Geese were reported on Spring Field Days at Greeneville quite consistently through 1968.

Individuals of the nonmigratory race, the Giant Canada Goose, were introduced into several areas by the Tennessee Wildlife Resources Agency beginning about 1968; there appears to be no published history of these introductions. The first successful nestings reported were on Old Hickory Lake in 1969 (40:68), on Percy

Priest Lake in 1970 (41:69), and at Cross Creeks in 1972 (43:76), all in Middle Tennessee. Within a few years summer resident geese and nests were reported in all regions of the state except extreme southwestern Tennessee. The most southwestern locality is the Hatchie National Wildlife Refuge, Haywood County, where geese first nested in 1975 (letter from Linda Watters).

OSPREY—Ganier's preliminary list of Tennessee birds (1917) describes the Osprey as only a migrant. The first known nests in the state were at Reelfoot Lake, but it is not clear when nesting started there. Ganier (1933b) stated only that "one or two pair . . . are found on the lake during the summer," but a 1963 report (34: 22) mentioned a nest site "used for thirty or forty years." In recent years two to four pairs have nested at Reelfoot (Pitts 1985).

The areas in which nesting Ospreys next appeared were in East Tennessee. For several years all attempts at nesting were unsuccessful: in Knox County in 1937 (8:53), in Greene County in 1940 (27:4), and on Watts Bar Lake in 1961 (32:44). At the latter locality, unsuccessful attempts continued for several years, but finally in 1977 some young Ospreys fledged (48:105). After this the Osprey population on Watts Bar and nearby Chickamauga Lakes increased to fifteen nests in 1986 and seventeen in 1987 (Simpson 1987).

The first successful nest in Middle Tennessee was in 1984 at the Tennessee National Wildlife Refuge (55:91). More recently, in 1987, Ospreys nested successfully at Old Hickory Lake, Sumner County (58:140).

From being a bird not known to nest in Tennessee in the early part of this century, the Osprey has increased to a small but well established breeding population at Reelfoot Lake, an expanding population along the eastern Tennessee River, and apparently the beginning of a breeding population in Middle Tennessee.

BALD EAGLE—Three to four pairs of Bald Eagles nested at Reelfoot Lake up to the 1930's, after which their numbers declined and they ceased nesting there in the early 1960's (Pitts 1985). Eagles visited all parts of the state as migrants and winter visitors, and the wintering populations have increased greatly, especially in the northwestern corner of Tennessee. In 1980 a project was initiated of introducing eagles by hacking young birds (55:83), which led to some of the successful nestings in recent years.

The first successful nest in twenty years was in 1983 at Cross Creeks National Wildlife Refuge, Stewart County. By 1986 there were four successful nests, two in Stewart County and one each in Benton and Jackson Counties (57:106–107). Another locality is in Coffee County where beginning in 1985 eagles have built or repaired a nest, only to abandon it in three successive years (56:110; 58:140). All of these new breeding pairs are nesting in or very close to Middle Tennessee.

BLACK-NECKED STILT—The regular nesting area of the Black-necked Stilt nearest to Tennessee is the Gulf Coast of Louisiana. In 1981 two birds were observed in Shelby County for the first state record, and in 1982 a pair nested in Ensley Bottoms in that county; these and subsequent observations of stilts in that area were described by Coffey (1985). The species has not been seen outside of this corner of the state except for one bird at Clinton in Anderson County on one day in August 1985 (57:19–20).

ROCK DOVE—Quoting from a note written by Albert F. Ganier in 1935 (6: 93): "The Rock Dove . . . was brought to America as a domesticated bird. . . . When the writer prepared his list of the birds of the State in 1933 he did not include the Rock Dove because he knew of no places where it had naturalized in the State. Last summer, however, while inspecting the vast old rock quarry a few miles southwest of Franklin, he found that a number of these birds had taken up permanent residence there. They were nesting within cavernous recesses in the

quarry face which is more than 100 feet high and several hundred feet long. Under the circumstance it is now proper to include this species in the Tennessee list." Because of the common attitude that the Rock Dove was not a "real" wild bird, it was not listed in the Christmas Bird Counts in Tennessee until 1958, and the lack of early records makes it impossible to trace its history.

ALDER FLYCATCHER—This species (*Empidonax alnorum*) and the following (*E. traillii*) have been observed on migration in scattered locations in the state, although records are few because of the difficulty of identifying these birds.

Alder Flycatchers have apparently nested at only one place in Tennessee, near Carver's Gap on Roan Mountain, Carter County. Nesting was first observed in 1978 (49:95). Since this area was visited frequently and over many years before this time, it is improbable that nesting flycatchers were overlooked for long, if at all. Nesting pairs have been found there several times since 1978.

WILLOW FLYCATCHER—The first nests of Willow Flycatchers in Tennessee were found in 1958 at Elizabethton (29:37–42). Between then and 1965 two more nesting localities in northeastern Tennessee were found (31:55; 35:66). The known nesting range gradually expanded to the south and west, reaching its southern limit in 1968 when two nests were found in the Hiwassee River area of Meigs County (40:70) and its western limit in 1972 when one was found near Nashville (43:76). By 1986 Willow Flycatchers have been found singing and behaving like breeding birds at nearly twenty locations (numerous reports in *The Migrant*), although no nests have been reported from these places. These localities are north and east of a line extending from Reelfoot Lake to Columbia and then to Chattanooga. The trend in range expansion has clearly been from the northeastern corner of Tennessee southwestward down the East Tennessee Valley and westward across the northern part of the state.

EASTERN PHOEBE—This species is a regular migrant and winter resident throughout the state, but prior to 1940 nesting phoebes were known only north and east of a line extending eastward from the Tennessee River at the Kentucky border and passing south of Nashville, Murphreesboro, and Athens. South of that line they were apparently absent except for one record of phoebes nesting in Wayne County in 1938 (9:53).

First nesting records south of that line are few. Phoebes were reported nesting in Shelby County in 1942 (13:34), at several places along US 64 from the Tennessee River east to Waynesboro in 1948 (19:5), and at Chattanooga in 1961 (32:39). These records probably do not give a complete picture of the expansion of nesting phoebes southwestward because they have been found regularly in all breeding season forays held by TOS members since 1971, covering counties in all parts of the state.

TREE SWALLOW—In Ganier's preliminary list of Tennessee birds (1917) he described Tree Swallows as migrants, not breeding in the state. Later he published (35:51) a first record of these swallows nesting at Reelfoot Lake in 1918. The changes in nesting distribution from then until 1982 have been summarized by Nicholson and Pitts (1982). After the 1918 record there were no summer records until 1942, which was from Lauderdale County, and no nesting records until 1968 when a pair nested near Columbia and another near Norris, Anderson County. In the 1970's Tree Swallows nested at five new localities and from 1980 to 1986 at nine. Except for the increasing rate, there is no obvious pattern of expansion. Tree Swallows have by now nested in all sections of the state except for southern East Tennessee (south of Blount County) and Middle Tennessee south and east of Maury County.

CLIFF SWALLOW—Tennessee is near the southeastern corner of the breeding

range of these swallows. There are three localities in the state which have had nesting colonies for many years. The northernmost is on the Cumberland River in Stewart County, where nests were present on the locks controlling the river by 1936 (this and the following colony described by Ganier and Weakley, 1936). The southwestern colony was on a rock face called Swallow Bluff on the western Tennessee River in Decatur County, also by 1936. The southeastern colony was on the Market Street bridge in Chattanooga in 1942, reported by Coffey (13:47–48) who wrote that a local person said that the swallows had been there for several years.

The changing distribution of nesting Cliff Swallows through the year 1977 has been described by Alsop (1981). His maps and more recent records show an interesting pattern of spreading from the three early colonies. From the one on the Cumberland River swallows gradually colonized bridges upriver, reaching Nashville by 1960 and Jackson County by 1986 (57:108–109). On the western Tennessee River, colonies had been formed from the southern to the northern state lines by 1963, and had spread eastward in the Duck River system as far as Coffee County by 1986 (57:108–109). From the Chattanooga area there occurred a gradual expansion up the eastern Tennessee River and its tributaries; nesting colonies were present in 1961 at Dayton in Rhea County and in 1970 in Grainger County (Alsop 1981). The swallows' nesting had reached northeastern Tennessee at Watauga Lake by 1984 (55:95).

In addition to the spread of Cliff Swallows from the three earliest known nesting locations, colonies had formed in West Tennessee which seem to be outside the directions of the range expansion described above: in Shelby County in 1973 and in Hardeman County in 1977 (Alsop 1981).

BARN SWALLOW—The earliest and a unique record of a Barn Swallow nest in Tennessee is of a nest "in an old barn" near Bell Buckle, Bedford County, in 1893 (McEven 1894). The next record states that by 1922 there were several nesting colonies near Nashville (Ganier 1922), and these were then believed to be at the southern limit of the swallows' range. By 1933 several sets of Barn Swallow eggs had been collected in the East Tennessee Valley from Athens northward (5:3). After that year the nesting range seemed to expand rapidly to the south and west, although there are few good records of first nesting in any area except Shelby County where they nested first in 1935 (41:57). They were observed nesting in Lincoln County in 1937 (46:31), near Jackson in 1952 (23:49), and near Pickwick in 1954 (25:52). By 1967 Barn Swallows had been observed on all breeding bird census routes in Middle and West Tennessee, including routes in the southern tier of counties: Wayne, Lawrence, and Giles (39:4–5).

BROWN-HEADED NUTHATCH—These southern nuthatches have often been observed a few miles south of the Tennessee border. The first report of this species in Tennessee was at Collegedale, Hamilton County, in 1968. Haney (1981) described this record and others in Hamilton County; he also described a few records from other areas where the birds have not been seen again. In 1985 a nest was found in Cleveland, Bradley County, fifteen miles northeast of the earlier sites (56:80). Twice these nuthatches have been observed on Christmas Bird Counts in southern Meigs County, in 1985 (56:8) and 1987 (58:4).

BROWN CREEPER—This species is a regular winter resident across Tennessee and a breeding bird in the Smoky Mountains (Stupka 1963). The first known lowland nesting occurred in 1976 at Radnor Lake near Nashville (49:86–87); a pair nested there just one year. In the following year a nest was observed being built in Dyer County, only to be abandoned, but in 1979 a nest with young was found in the same area (50:81–82). Ford (1987) described the presence of singing

Brown Creepers in May, June, and July in 1985 and 1986 in five counties in West Tennessee from the northern to the southern boundaries; no nests were found. The most recent new location is Bays Mountain, Sullivan County, in East Tennessee, where in 1987 a creeper's nest with young was found (58:104).

The generally recognized southern breeding boundary of Brown Creepers outside of the Appalachians is in the Great Lakes region. The recent records in Tennessee suggest that individual pairs of creepers may nest south of the usual range if they find suitable habitat and a nesting site.

HOUSE WREN—Few of the early ornithologists in Tennessee observed House Wrens even as transients, and none found nesting birds. Herndon (1956) summarized the records of this species in the state through 1955; the earliest reported nest was in 1913 at Johnson City, and all nests found up to 1955 were in East Tennessee from Knoxville northeastward.

After 1955 the reports of nesting House Wrens indicate two trends. The first was an irregular expansion westward across the northern half of the state and then southward in West Tennessee. The first nesting in Nashville was in 1957 (28:43), in Dyersburg in 1976 (50:86), at Byrdstown in 1978 (49:68), in Memphis in 1979 (50:86), in Union City and Martin by 1984 (56:36–37), and at Gallatin, Dover, and Clarksville by 1985 (56:111).

The second direction of expansion was southwestward in the East Tennessee Valley. Surprisingly, this movement was slower than to the west. Although House Wrens were nesting in Knoxville by 1950, nestings were not reported from localities to the southwest until 1984 in Chattanooga (letter from K. H. Dubke), and 1986 in Maryville and Cleveland (57:114). By 1986 House Wrens were nesting in all sections of the state except southern Middle Tennessee and southeastern West Tennessee.

EUROPEAN STARLING—Introduced into the New York City area in 1890 (Chapman 1932), Starlings were first reported in Tennessee in 1921 at two localities, Bluff City, in Sullivan County in northeastern Tennessee, and Nashville (Ganier 1924). In the next seven years they appeared at Knoxville in 1923 (33: 19), Athens in 1926 (Trenholm 1926), and Memphis in 1928 (3:48). In five more years they had appeared in all sections of the state and their numbers increased so that in 1934 they were reported from all Christmas Bird Counts in Tennessee and large winter roosts were present in all regions.

All but one of the first appearances of Starlings at a locality were in fall, winter, or early spring, but nesting was observed in a very few years. In 1925 nests were found at Bristol and Knoxville (Ganier 1925), in 1926 at Athens (Trenholm 1926), and in 1928 at Nashville (Ganier 1928). In West Tennessee the first observed nestings were in 1933 at McKenzie (5:42) and in 1935 at Memphis (6:34).

The general trend of first appearances and of first nestings in Tennessee was from northeast to southwest. Most Starlings wintering in Tennessee also come from the northeast; of birds banded near Memphis in the winters of 1934 through 1936 (Coffey 1938), three were recovered near the point of banding and twenty were recovered from areas 300 to 1,000 miles to the northeast.

BLUE GROSBEAK—In Ganier's lists of Tennessee birds (1917, 1933a) he wrote that the Blue Grosbeak was a "rare" summer resident in West Tennessee, "very rare" in Middle Tennessee, and absent in East Tennessee. Coffey (1955) summarized early records in the Memphis area, including a nesting record from 1947 at Grand Junction, Hardeman County. Goodpasture (1968) did the same for the Nashville area, where the first recorded nest was in 1962. Most of the records of this grosbeak's first appearance in an area were for the years 1945 through 1959. These do not form a pattern of steady range expansion, but rather

they are scattered across all parts of the state. In East Tennessee the first record of presence during the nesting season was in 1943 in the Great Smoky Mountains area (Stupka 1963), and the earliest recorded nest was in 1951 at Knoxville (22: 44). After 1968 almost all of the Spring Field Days in the state reported Blue Grosbeaks, and all county forays conducted since 1971 have found this species, so it is now an uncommon but regularly nesting bird in open and agricultural land over the state.

SONG SPARROW—Song Sparrows have been regular winter residents and migrants in all parts of Tennessee for many years (Ganier 1917, 1933a). They probably nested in the northeastern corner of the state almost a century ago because Rhoads (1895) reported them present in June at Johnson City and along the Doe River in Carter County, but none at other areas he visited. By 1938 Song Sparrows were reported as nesting at Shady Valley (5:23), Roan Mountain (7:86), Johnson City, Greeneville, and Knoxville, with no nesting reported from south or west of Knoxville (9:46–50).

First records of nesting in other regions of the state, arranged chronologically, are: 1952 at Cookeville (24:54), 1966 at Crossville (37:41), 1968 at Nashville (39: 65), 1972 near Winchester (43:77), 1984 at Columbia (55:71), and 1986 near Murphreesboro (57:110).

Other areas have had Song Sparrows present in the nesting season and singing or otherwise behaving like breeding birds; significant reports in chronological order are: 1942 at Chattanooga (13:48), 1953 at Tracy City (24:54), and 1976 in Benton County (47:83). Reelfoot and Memphis have had several sporadic records of single birds present in the nesting season, and there is one report of a juvenile Song Sparrow near Reelfoot in 1976 (47:99). Concerning this area, however, Pitts (1985) wrote that "the small and irregular number of nesting season records indicates it is not yet established as a nesting species."

In summary, Song Sparrows nested in the northeastern mountains and the upper East Tennessee Valley before and during the 1930's. They became established as breeding birds in the northeastern half of Middle Tennessee by 1975. As of 1987 there are no solid nesting records south or west of Columbia.

BROWN-HEADED COWBIRD—Mayfield (1965) believed that the cowbird's original range was the short-grass prairie and similar grasslands, perhaps only in areas where bison were common, and that their range expanded eastward as cattle herding and farming created suitable habitat. The only records in Tennessee prior to 1900 were in April 1885 in Roane County (Fox 1886) and in early May at Samburg, Obion County (Rhoads 1895). In his 1917 list of Tennessee birds, Ganier listed cowbirds as rare summer residents in West Tennessee and very rare in Middle and East Tennessee. The following records indicate, however, that breeding did not occur in East Tennessee until much later than 1917.

The presence of cowbirds on spring migration and the fact that their breeding can be proved only by finding their eggs in the nests of other species has resulted in few definite records of first breeding in any area. The following records, listed chronologically, indicate that at least by 1935 cowbirds were breeding in all sections of the state: in 1918 and succeeding years cowbird eggs were found in bird nests in Davidson County (7:32); in 1921 a cowbird egg was found in a Prothonotary Warbler's nest near Memphis (Ganier 1921); in 1931 cowbird eggs were first found in northeastern Tennessee (5:56); and in 1932 the first breeding apparently occurred at Knoxville (3:38), because there is good evidence against their having bred there in prior years (Howell and Monroe 1957); in 1936 immature cowbirds were present in June and July at Reelfoot Lake (Whittemore 1937); and in 1935 cowbird eggs were found in bird nests in Rutherford County (7:72). By

the 1960's several lists of birds from regions across the state had been published and all of them listed the Brown-headed Cowbird as a regular summer resident.

HOUSE FINCH—A native of the Rocky Mountains and Pacific Coast, the House Finch was introduced about 1940 into the northeastern United States where it spread rapidly. The first locality in Tennessee where they were observed was Greeneville, in March and November–December 1972 (43:87). The following year they appeared at Maryville and Knoxville (45:24, 96). In 1977 they appeared in Middle Tennessee in Columbia (48:48) and Cheatham County (49:43). They reached the southern part of East Tennessee at Chattanooga in 1979 (51:33). The first reports from West Tennessee were from Humboldt, Gibson County, in the winter of 1979–80 (Sarah Hayes, letter from Martha Waldron) and from Memphis in 1980 (51:38).

All records from 1977 and earlier were from winter and early spring. In the next year some House Finches were observed through June at Maryville (49:95) and in April 1979 at Nashville (50:69). First records of reproduction were of adults feeding juvenile birds in 1979 at Knoxville (51:95) and in 1980 at Kingsport (51: 62). Further spread of nesting finches is shown by the following reports: at Chattanooga in 1982 (53:69), at Nashville in 1984 (55:93), at Lawrence and Sumner Counties in 1985 (56:112), in Montgomery County in 1986 (57:111), and possibly as early as 1982 at Memphis (57:104).

House Finches have spread from the northeast corner of the state to the west and south, first occupying residential areas of larger cities. At present, sixteen years after their first appearance, they are regular winter visitors and breeding birds in all sections of East and Middle Tennessee and in the southern half of West Tennessee.

EVENING GROSBEAK—The earliest report of this species in Tennessee was in Van Buren County in 1936 (18:45); this was not confirmed. The sustained invasion of the state by Evening Grosbeaks began in the winter of 1945–46 when they were present in the northeastern corner of the state, in Carter, Washington, and Greene Counties (16:53–55; 27:8). In the winter of 1951–52 grosbeaks appeared there again and farther southwest in the Great Smoky Mountains and at Kingston, Roane County (25:7–9). Although they did not appear every winter they gradually extended their range south and west in succeeding winters until in 1968–69 they were seen in all sections of West Tennessee including the Memphis area (39:75). There were, however, no records of Evening Grosbeaks in the southern tier of counties from the Cumberland Plateau west through Wayne County until after 1970.

The expansion of Evening Grosbeaks from the northeast to the south and west across the state is paralleled by two other sets of data. Banding returns revealed that grosbeaks migrated between Elizabethton, Tennessee, and four states to the northeast (West Virginia, Pennsylvania, New Jersey, and New York) and only one state to the north, Michigan (Herndon 1979). Secondly, analysis of Christmas Bird Counts (Tanner 1985) showed that Evening Grosbeaks have been most frequent and in largest numbers in the Great Smoky Mountains, with the frequency and numbers decreasing westward.

HOUSE SPARROW—This species was introduced from England into the New York City area in 1850 (Chapman 1932). There is no record of when House Sparrows first appeared in Tennessee. Fox (1886) reported them present in Rockwood, Anderson County, in 1884, and Langdon (1887) reported a few seen in Knoxville and Maryville in 1886. Deaderick (1899) described them as abundant in Montgomery County in 1891 to 1895. Torrey (1896) called them "distressingly superabundant" at Chattanooga in 1894. Rhoads (1895), who visited the four

corners of Tennessee in 1895, found them "abounding in all larger towns and villages." So by 1895 these sparrows were common in all parts of the state.

DECREASING RANGES

Nine species of birds have certainly decreased in range; two of these are now extinct, and two others have entirely disappeared from Tennessee. Besides the nine described below, the Loggerhead Shrike and Dickcissel have decreased in number in the state, but there has been no consistent contraction of their ranges.

TRUMPETER SWAN—Although Trumpeter Swans were in early times a fairly numerous migrant and winter resident from the junction of the Ohio and Mississippi Rivers southward (Mengel 1965), only a few have definitely been reported from Tennessee. Audubon saw some on the Mississippi River in Lauderdale and Tipton Counties in November 1829 (11:60–61). Pindar (1925) reported this swan as a rare migrant, presumably on Reelfoot Lake in 1884–89, and Rhoads (1895) reported a few on Reelfoot Lake in 1895. Soon after this time, Trumpeter Swans disappeared from the southeastern part of their range until by the 1930's (Kortright 1943) they remained only in the northern Rocky Mountain region.

PEREGRINE FALCON—Peregrine Falcons once nested in about twenty places in Tennessee. Most of these were on the cliffs bordering the western edge of the Cumberland Plateau: in Pickett, Fentress, and Scott Counties to the north (53: 28); at Fall Creek Falls State Park in Van Buren County (14:60) and Savage Gulf in Grundy County (4:38); and in the Tennessee River Gorge in Marion County (10:14) to the south. Three eyries were known in northeastern Tennessee: in the Doe River Gorge in Carter County (17:23; 21:60); on the Devil's Looking Glass near Erwin, Unicoi County (4:43); and on Dorn's Bluff on the Holston River in Sullivan County (4:43; 6:18). Two old eyries were located on river cliffs near Knoxville (11:3; Wake 1895), and a third near Signal Mountain, Hamilton County (Spofford 1942); information on this last site is very vague. Peregrines nested at two locations near Mount LeConte in the Great Smoky Mountains (Stupka 1963). The most isolated, unusual, and best described eyrie was in the broken top of a cypress tree at the northern end of Reelfoot Lake (Spofford 1942, 1943).

The disappearance of these falcons from eastern North America was caused by the harmful effects of DDT and similar insecticides on their reproduction (Hickey and Anderson 1968). The last known nesting in the Cumberland Plateau was in 1940 in Fall Creek Falls Park (11:55). The last reported nest in northeastern Tennessee was on Dorn's Bluff in 1935 (6:18–19). In the Smokies, Peregrines last nested in 1942 (Stupka 1963). Apparently the last successful nest in Tennessee was in 1947 at Reelfoot Lake (18:49–51; 56:34). Here, as at other eyries, individual Peregrines continued to be present in the breeding season for several years without any evidence of nesting.

A moderate number of migrant Peregrines and a few wintering birds are reported in Tennessee almost every year. Recently a determined effort has been made to re-establish nesting Peregrines in the state by a hacking program (55:83), which we hope will be successful.

GREATER PRAIRIE-CHICKEN—The only record of a living prairie-chicken in Tennessee was made by Alexander Wilson in 1810 somewhere north of Nashville (Ganier 1974). These birds were then fairly common in The Barrens of southern Kentucky from where they disappeared "in the first few decades of the nineteenth century" (Mengel 1965). Bones of prairie-chickens have been found in caves in southeastern Tennessee, but the age of these fossils was not determined (45:82–83).

WILD TURKEY—The history of turkeys in Tennessee has been summarized

by Vincent Schultz (1955) and J. C. Lewis (1962); the following is a condensation of these two reports. Turkeys were originally found in all sections of the state from the eastern mountains to the Mississippi bottomlands. They disappeared first from the Central Basin and then from the better farming regions of the northern Highland Rim, West Tennessee, and the East Tennessee Valley. Between 1940 and 1951 they were almost limited to the eastern mountains, the Cumberland Plateau, portions of the western Highland Rim, and portions of the Mississippi and Hatchie River bottoms. Release of turkeys raised on game farms began at least by 1941, but the range continued to decrease until by 1959 turkeys were known from only 32 counties. In more recent years turkeys have been trapped in some areas and transported to others where they survived, so that by now Wild Turkeys are more widespread in Tennessee than they were twenty years ago.

PASSENGER PIGEON—Passenger Pigeons were considered by Ganier (1974) to have been regular migrants in all of Tennessee but not breeding in the state. All of the Tennessee records assembled by Schorger (1955) for the years after 1840 came from the section of the state between Brownsville to the west and Nashville to the east. An article in an early issue of *The Migrant* (4:18–19) describes a large roost near Nashville in the autumn of 1870. The last record for Tennessee came from a correspondent of Rhoads (1895) who described hunting of pigeons near Brownsville, Haywood County, in 1893. For Passenger Pigeons in the wild, Schorger (1955) wrote that "the year 1900 may be considered as marking the end."

CAROLINA PARAKEET—Records of the Carolina Parakeet made by early travelers in Tennessee have been found and summarized by Daniel McKinley (1979). Most of the observations were made along the Mississippi River and in counties (Lauderdale and Haywood) whose rivers flow into the Mississippi. Other records were made along the western Tennessee River from Stewart to Wayne County, and along the Cumberland River from near Nashville as far east as Smith County. The last observations of parakeets in Tennessee were made in 1874 (Lauderdale County) and 1876 (Haywood County).

The species neared extinction by 1900 from several causes: killing of parakeets to protect fruit trees, trapping for cage birds, and random shooting of these colorful and tame birds. The last specimens ever collected were in Florida in 1904 (Chapman 1932).

COMMON RAVEN—Alexander Wilson wrote that he frequently saw ravens when he travelled from Nashville to Natchez in 1810 (Ganier 1974, Nicholson 1986). This appears to be the only report of ravens west of the Cumberlands in Tennessee. Between 1882 and 1908 ravens were found at Lookout Mountain, Hamilton County, and on Walden Ridge in the eastern Cumberlands (Fox 1882, 1886; Rhoads 1895; Howell 1910). Ganier (1923, 1974) received occasional rumors of ravens in the western Cumberlands which, if correct, indicated that they nested there as late as 1920. Since that time ravens have been reported regularly only from the Appalachian Mountains along the eastern margin of the state, from Hump Mountain in Carter County (8:1; 20:30) to Big Frog Mountain in Polk County (Wetmore 1939).

BEWICK'S WREN—These wrens were found in all sections of the state visited by early ornithologists, but they were usually reported to be present in small numbers. Ganier (1933a) described their status as "fairly common" in each of the three regions of Tennessee. Their numbers reported on Christmas Bird Counts began to decrease in 1965 (Tanner 1985). The changes in numbers and distribution can best be described by considering the regions separately.

In the northern part of West Tennessee Bewick's Wrens were missing from Spring Bird counts after 1967 and from Christmas Bird Counts after 1972. Breed-

ing bird surveys around Reelfoot Lake in 1985 found none (Pitts 1985). In the southern part of this region this wren has been reported from only a few localities since 1974, and is considered now to be rare (Waldron 1987).

In Middle Tennessee, Bewick's Wrens have been reported on Christmas Bird Counts with the highest frequency and average numbers of any region; it has been found quite consistently on Spring Bird Counts, and in 1987 a surprising number were found nesting in Houston and Stewart Counties (58:141–142).

For East Tennessee, Christmas Bird Counts after about 1940 had the lowest frequency and average number of Bewick's Wrens of the three major regions. Combining the East Tennessee Valley with the Cumberland Plateau, the last records in *The Migrant* were of single birds in 1977 in Cumberland County (48: 106) and 1978 in Knox County (49:70). The species disappeared from Spring and Christmas Counts in this region between 1971 and 1976.

BACHMAN'S SPARROW—The habits and history of Bachman's Sparrow in Tennessee have been described by C. P. Nicholson (1976). The species was formerly found throughout the state except for the northwestern quarter of West Tennessee. A trend of decreasing range and numbers began about 1960 or earlier, being most pronounced in West and Middle Tennessee. In 1975 the species was listed as "endangered."

Beginning in 1980 Bachman's Sparrows have re-appeared, or been rediscovered, in areas where they were unknown for several years. These areas are as follows: McNairy, Hardeman, Hardin, and Fayette Counties in southern West Tennessee (55:37, 68; 58:138); Henry, Montgomery, and Stewart Counties in the northern part of the western Highland Rim (57:80, 104; 58:142); Giles, Lawrence, and Lewis Counties in southern Middle Tennessee (58:99, 142); at Westel in Cumberland County (51:63); and in Cocke and Grainger Counties in the upper East Tennessee Valley (52:98; 56:81). These records, erratic in both place and time, are consistent with the hypothesis that the habitat of Bachman's Sparrow is a temporary stage in forest succession (see Nicholson 1976) and therefore suitable habitat appears and disappears in different places. This, however, is not an adequate explanation of the widespread decrease because there appears, to the human eye at least, to be many suitable areas unoccupied by these sparrows. The cause of the overall decline is unknown.

DISCUSSION AND CONCLUSIONS

The histories of the 26 species whose ranges have expanded in Tennessee exhibit a few geographic trends. Six species were first found in the northeastern corner of the state and their ranges expanded southwestward down the East Tennessee Valley and westward to Middle and West Tennessee and then southward. These six are Willow Flycatcher, House Wren, European Starling, Song Sparrow, House Finch, and Evening Grosbeak. All except the grosbeak now breed in Tennessee. Two other species, Eastern Phoebe and Barn Swallow, similarly expanded towards the southwest, but they were originally known to nest in a larger area, the northeastern quadrant of the state.

The direction of spread of four species was opposite to the above, being towards the northeast; these are Cattle Egret, Yellow-crowned Night-Heron, Blue Grosbeak, and at least in the East Tennessee Valley, Osprey. One, the Brown-headed Cowbird, expanded to the southeast.

The geography of the larger rivers and the formation of new reservoirs has obviously affected the range expansions of Anhinga, Great Blue Heron, Black-crowned and Yellow-crowned Night-Herons, Osprey, and Bald Eagle. The construction of concrete bridges and dams on rivers and creeks, providing nesting

sites, has increased the ranges of Eastern Phoebes and Cliff Swallows, and to a lesser extent, of Barn Swallows.

Three species have entered corners of Tennessee and nested several times in these localities but have not further expanded their ranges more than a few miles; these are the Black-necked Stilt, Alder Flycatcher, and Brown-headed Nuthatch. The remaining species cannot be fitted into a pattern of range expansion because of lack of information (House Sparrow, Rock Dove), because of an erratic spread (Tree Swallow, Brown Creeper), or because the birds were introduced into most areas by man (Canada Goose).

The House Sparrow was the earliest of the species considered here to enter and spread across Tennessee; it had reached all regions before 1900. To illustrate the sequence of other range expansions, the species can be grouped tentatively by the decade in which they entered the state or began to spread as follows: in the 1920's—European Starling; in the 1930's—Barn Swallow; in the 1940's—Blue Grosbeak and Evening Grosbeak; in the 1950's—Anhinga, Black-crowned Night-Heron, Eastern Phoebe, House Wren, and Song Sparrow; in the 1960's—Great Blue Heron, Cattle Egret, Willow Flycatcher, Cliff Swallow, and Brown-headed Nuthatch; in the 1970's—Yellow-crowned Night-Heron, Osprey, Alder Flycatcher, Tree Swallow, Brown Creeper, and House Finch; in the 1980's—Bald Eagle and Black-necked Stilt. The Canada Goose, Rock Dove, and Brown-headed Cowbird cannot be significantly classified into any period.

Most of the range expansions occurred between 1950 and 1979. This conclusion cannot be made confidently, however, because this was also a time of increasing number of birdwatchers and their activity. I cannot suggest any environmental changes which might have caused the expansions other than the formation of reservoirs and building of concrete structures as described above. There is no correlation between the decade of range expansion and the direction of expansion.

Of those species which have decreased in Tennessee, five did so because of hunting by man. The Passenger Pigeon and parakeet became extinct. The Trumpeter Swan and prairie-chicken were eliminated from the southeastern part of their ranges, which included northwestern Tennessee. The Wild Turkey was reduced by both hunting and clearing of forests; it is now increasing because of game management. The Raven might be added to this list although there is no direct evidence of what caused its disappearance from all but the Appalachian Mountains.

The cause of the disappearance of Peregrine Falcons was clearly the failure of their reproduction due to concentrations of DDT and similar chemicals.

The causes of the shrinking ranges of Bewick's Wrens and Bachman's Sparrows are not clear. There are no parallels between either the times or the areas of their disappearance. That of the Bewick's Wren has almost coincided with the expansion of the range of the House Wren. This suggests that the latter has driven out its relative, but no other connection has been found between the two, and both Herndon (1956) and Laskey (1966) observed that when both species were present in the same area the House Wrens were confined to residential areas and Bewick's Wrens were in the country.

Counting only those species that were not introduced by man, there are twenty-two that have increased their ranges in Tennessee and only nine that have diminished. The numbers are probably slightly biased because observers are much more aware of the appearance of a species in a new area than they are of a disappearance, but it is clear that expansions outnumber decreases. Is there any significance to this? Herons, geese, Ospreys, and Bald Eagles have spread because of new man-made reservoirs and in part because of a growing sentiment for bird

protection. Natural causes for the expansion of any of these species are unknown and are probably diverse.

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AUTUMN HAWK COUNTS—1987

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In 1987 hawkwatchers spent 286.8 hours at lookouts in Tennessee; the total count was only 4,766 hawks of 13 species for an average of 16.6 hawks per hour (Table 1). The 1987 count was far below the 1986 total of 11,161 hawks (42.0 per hour). Watchers used nine sites in 1987; eight of these sites were used in earlier years. The new site was Cookeville Fire Tower at an elevation of 335 m in Putnam County on the Cumberland Plateau; observers spent 64 hours on 33 days at this site. Other site totals are given in Table 2.

The surprise of the season was 208 Mississippi Kites (*Ictinia mississippiensis*) counted by Barbara Stedman on 22 August on Island 13, six miles south of Tiptonville, on the Mississippi River. She saw 116 kites between 0800–0900 as they came out of the trees lining the river and headed SSW down the river. This is the first major migration of kites reported from Tennessee.

The total of 4,067 Broad-winged Hawks (*Buteo platypterus*) counted this year was only 40% of last year's total of 10,195. The average number of Broad-wings reported per hour of observation in 1987 (14.2) was far below the average of 38.4 per hour seen in 1986. Most Broad-wings were seen between 18–26 September. Tom Patton reported 502 from Signal Point on 18 September. Observers from six sites reported a total of 693 on 20 September. Jim Peters counted 636 at Sewanee Cross on 26 September; this was the highest daily count of the season. Johnnie Sue Lyons counted 114 from Signal Point on 30 September. Few Broad-wings were reported after this date.

Eighty-eight Red-tailed Hawks (*Buteo jamaicensis*) were reported this year for an average of 0.31 per hour. This is slightly below the 1986 total of 101 (0.38 per hour). The highest daily counts in 1987 were from Signal Point where Tom Patton observed 10 on 18 September and Ken Dubke tallied 22 on 4 October. Eleven Red-shouldered Hawks (*Buteo lineatus*) were reported; this is down from the 1986 count of 23. The 1987 reports were scattered throughout the season.

A total of 162 accipiters (0.56 per hour) was counted this year; 89 were Sharp-shinned Hawks (*Accipiter striatus*) (0.31 per hour), 38 were Cooper's Hawks (*Accipiter cooperii*) (0.13 per hour), and 35 were unidentified accipiters (0.12 per hour). Although down from last year's record count of 307 accipiters (1.16 per hour), the 1987 total equals the average of the last several years. Almost half of the total number was counted on two days; a total of 23 accipiters was reported from six sites on 20 September and a total of 21 was reported from four sites on 26 September. The remainder of the reports was distributed throughout the season. No site reported more than 12 accipiters in a single day.

The total of 11 Northern Harriers (*Circus cyaneus*) (0.04 per hour) reported this year was slightly below the average of 15 per year (0.05 per hour) reported since 1980. Twenty-three Ospreys (*Pandion haliaetus*) (0.08 per hour) were counted; this is down from last year's count of 29 (0.11 per hour) but is up slightly from the average of the previous five years (0.06 per hour). Over half of the total number of Ospreys was reported from Look Rock, which had a daily high count of 5 on 20 September. No eagles were reported this year.

The total of 24 American Kestrels (*Falco sparverius*) (0.08 per hour) reported this year was down from last year's total of 40 (0.15 per hour) but was slightly higher than the average since 1980 of 17 per year (0.07 per hour). Audrey Hoff

Table 1. Autumn hawk counts—1987.

Date	Location	Reporter (# Obs.)	Hours	TV	BV	SS	CH	UA	RT	RS	BW	UB	NH	OS	AK	Other	Total
8/22	Island 13	B. Stedman (1)	2.5	—	—	—	—	—	—	—	12	—	—	—	—	208MK	220
9/14	Sewanee Cr.	J. Peters (1)	2.0	—	—	2	1	3	—	—	14	—	1	—	—	—	21
9/15	Cookeville	B. Stedman (1)	1.5	—	—	1	—	—	1	—	15	—	—	—	—	—	17
9/15	Look Rock	R. Clark (1)	4.0	—	—	—	—	—	—	—	30	—	—	1	—	1u	32
9/15	Sewanee Cr.	J. Peters (1)	1.0	—	—	1	—	—	—	—	9	—	—	1	—	—	11
9/16	Look Rock	B. Stedman (3)	5.75	—	3	2	—	1	—	1	61	—	—	—	—	—	68
9/17	Look Rock	B. Stedman (3)	5.5	—	—	1	1	—	—	1	75	—	—	1	1	1PF	81
9/17	Sewanee Cr.	J. Peters (1)	1.25	—	—	2	—	—	—	—	7	—	—	—	—	—	9
9/18	Look Rock	B. Stedman (1)	5.0	—	—	1	1	—	—	1	60	—	—	1	2	—	66
9/18	Sewanee Cr.	J. Peters (1)	2.0	—	—	1	—	2	—	—	90	—	—	—	1	—	94
9/18	Signal Pt.	T. Patton (1)	4.75	8	4	6	—	—	10	—	502	—	2	—	1	—	533
9/19	Audubon Mtn.	L. Dubke (8)	7.5	23	—	1	—	—	1	1	242	—	—	—	1	5PF	274
9/19	Signal Pt.	K. Dubke (1)	8.25	—	3	1	—	—	3	—	297	—	1	—	—	—	305
9/20	Cookeville	S. Stedman (1)	4.0	—	5	1	—	—	—	—	22	1	—	1	—	—	30
9/20	Look Rock	A. Hoff (9)	8.5	—	—	5	—	1	—	—	316	7	1	5	1	2f, 1u	339
9/20	Ooltewah	L. Dubke (7)	6.5	5	1	—	1	1	6	1	33	1	—	—	—	—	49
9/20	Sewanee Cr.	J. Peters (3)	8.0	—	10	1	1	—	1	1	111	—	—	2	1	—	128
9/20	Signal Pt.	K. Dubke (3)	8.0	—	—	4	2	1	4	1	6	—	—	—	—	1f	19
9/20	Thorn Hill	Satterfield (2)	4.75	—	—	3	1	1	6	—	205	3	—	—	—	1f	220
9/21	Cookeville	B. Stedman (1)	2.0	—	—	—	1	—	—	—	29	—	—	1	—	—	31
9/21	Look Rock	D. Powers (3)	8.0	—	—	4	1	2	—	—	181	—	1	—	2	—	191
9/21	Sewanee Cr.	J. Peters (1)	1.5	—	3	—	—	2	—	—	52	—	—	—	—	—	57
9/21	Signal Pt.	J. Lyons (1)	3.75	—	—	—	—	—	8	—	33	—	—	—	—	—	41
9/21	Thorn Hill	P. Hartigan (1)	3.5	4	1	4	—	1	—	—	150	1	—	—	—	—	161
9/22	Cookeville	B. Stedman (1)	1.5	—	—	—	—	—	—	—	11	—	—	1	—	—	12
9/22	Look Rock	R. Clark (1)	3.0	—	—	2	—	—	—	—	136	—	—	1	—	1f	140
9/22	Raccoon Mt.	R. Doyle (1)	5.25	—	—	—	—	—	—	—	182	—	—	—	—	—	182
9/22	Sewanee Cr.	J. Peters (1)	2.5	—	—	1	—	1	—	—	13	—	—	—	1	—	16

TABLE 1. Continued.

Date	Location	Reporter (# Obs.)	Hours	TV	BV	SS	CH	UA	RT	RS	BW	UB	NH	OS	AK	Other	Total
9/22	Signal Pt.	J. Lyons (1)	1.75	—	—	—	—	—	1	—	5	—	—	—	—	—	6
9/23	Cookeville	B. Stedman (1)	3.25	—	—	2	—	—	—	—	37	1	—	—	—	—	40
9/23	Sewanee Cr.	J. Peters (1)	2.5	—	—	—	—	—	—	—	11	—	—	1	—	—	12
9/23	Signal Pt.	J. Lyons (2)	4.75	—	—	—	—	—	—	—	3	—	—	—	—	—	3
9/24	Sewanee Cr.	J. Peters (1)	1.75	—	—	—	—	—	—	—	38	—	—	—	—	—	38
9/24	Signal Pt.	J. Lyons (1)	2.5	—	—	—	1	—	—	—	9	—	—	—	—	–	10
9/25	Cookeville	B. Stedman (1)	4.5	—	—	5	—	1	—	—	15	—	—	—	—	1u	22
9/25	Sewanee Cr.	J. Peters (1)	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	0
9/26	Cookeville	S. Stedman (2)	5.25	—	—	2	2	1	—	—	11	—	—	—	—	—	16
9/26	Look Rock	A. Hoff (5)	6.5	—	—	9	1	2	2	—	93	—	1	3	6	3u	120
9/26	Sewanee Cr.	J. Peters (1)	4.0	—	—	—	—	3	—	—	636	—	—	—	—	—	639
9/26	Signal Pt.	K. Dubke (1)	8.0	—	—	1	—	—	—	—	—	—	—	—	1	—	2
9/27	Sewanee Cr.	J. Peters (2)	4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	0
9/27	Signal Pt.	K. Dubke (1)	8.0	—	—	2	1	—	7	—	92	—	1	—	—	—	103
9/28	Cookeville	B. Stedman (1)	3.0	—	—	—	—	—	—	1	29	—	1	—	—	—	31
9/28	Signal Pt.	T. Patton (1)	0.25	—	—	—	—	—	—	—	6	—	—	—	—	—	6
9/30	Cookeville	B. Stedman (1)	2.25	—	—	3	4	—	—	—	12	2	—	—	—	—	21
9/30	Signal Pt.	J. Lyons (1)	5.25	—	—	—	—	3	3	—	114	—	—	—	—	—	120
10/3	Look Rock	A. Hoff (5)	5.25	2	5	6	1	—	—	2	4	2	—	2	1	1PF, 1f, 3u	30
10/3	Signal Pt.	K. Dubke (1)	8.0	—	—	1	1	—	5	—	4	—	—	—	—	—	11
10/4	Signal Pt.	K. Dubke (1)	7.0	—	—	1	—	—	22	—	—	—	—	—	4	—	27
10/14	Cookeville	B. Stedman (1)	1.5	17	3	1	—	1	—	—	—	—	—	—	—	2u	24
36 Days	Others[1]		74.8	8	7	11	17	8	8	1	51	11	2	2	1	1PF, 1M, 5u	134
Total			286.8	67	45	89	38	35	88	11	4,067	29	11	23	24	239	4,766

[1] Includes sites with single day coverage and/or low total numbers of raptors.

Key to species abbreviations in tables: TV—Turkey Vulture; BV—Black Vulture; SS—Sharp-shinned Hawk; CH—Cooper's Hawk; UA—unidentified accipter; RT—Red-tailed Hawk; RS—Red-shouldered Hawk; BW—Broad-winged Hawk; UB—unidentified buteo; NH—Northern Harrier; OS—Osprey; AK—American Kestrel; MK—Mississippi Kite; u—unidentified raptor; PF—Peregrine Falcon; f—unidentified falcon; M—Merlin.

TABLE 2. 1987 site totals.

Location	Days	Hours	TV	BV	SS	CH	UA	RT	RS	BW	UB	NH	OS	AK	Other	Total	Total hawks per hour
Cookeville	33	64.0	17	15	22	18	6	4	2	191	10	2	4		1PF, 8u, 1M	301	4.7
Look Rock	15	69.25	2	8	33	7	11	3	5	974	14	4	14	14	2PF, 4f, 8u	1,103	15.9
Sewanee Cross	12	31.5		13	8	2	11	1	1	981		1	4	3		1,025	32.5
Signal Pt.	16	76.5	8	7	18	7	4	64	1	1,083		4		6	1f	1,203	15.7

counted 6 at Look Rock on 26 September; this was the highest daily count in 1987, but it was down from the record of 13 Kestrels reported from Look Rock last year on 5 October. The 8 Peregrine Falcons (*Falco peregrinus*) counted this year equalled last year's count, but with one surprise; Lil Dubke reported five Peregrines traveling together on 19 September at Audubon Mt. The only Merlin (*Falco columbarius*) reported this year was seen by Barbara Stedman on 24 September at Cookeville Fire Tower.

Sixty-seven migrating Turkey Vultures (*Cathartes aura*) were counted with the highest numbers reported by Lil Dubke on 19 September (23) at Audubon Mt. and by Barbara Stedman on 14 October (17) at Cookeville Fire Tower. Forty-five migrating Black Vultures (*Coragyps atratus*) were reported with a high of 10 seen by Jim Peters on 20 September at Sewanee Cross.

Corrigenda: Migrant 58:33, 1987: par. 2, change "James A. Peters" to "James R. Peters"; par. 4, change "10,196" to "10,195"; 58:36: par. 2, change "9 October" to "9 November"; 58:38: par. 2, add "S. Stedman" as observer at Flagpole Fire Tower.

Accepted 17 August 1988.

ROUND TABLE NOTE

The Migrant, 59(3):92, 1988

BANDED AMERICAN KESTREL RECOVERED AT SEWANEE, TENNESSEE—On 26 January 1987, Mr. Steve Cardwell of Sewanee, Franklin County, Tennessee, informed me by telephone that a small hawk was near his home on Rabbit Run Road, and that the hawk could not fly well. I joined him and after a short chase, we caught it in a brushpile. It was a small male American Kestrel (*Falco sparverius*) and bore a USFWS band (1493-05018) on its right tarso-metatarsus. It appeared to be in a starved condition but was apparently uninjured, unless bruised by a car. I took it home and fed it meat from salvaged dead birds and a poacher-killed deer furnished by the local wildlife officer. When I approached the kestrel with meat, it gave a cry of anticipation like that of a young bird. By 1 February it appeared to be in excellent health, and the weather was favorable for release. After feeding it, my wife and I took it into nearby Roarks's Cove to a field, where we freed it. It flew beautifully, even hovering over a distant field, perhaps searching for live prey.

On 20 April 1987, the Fish and Wildlife Service answered my request for information on this kestrel and reported that it had been banded by Mr. Sergej Postupalsky of the University of Wisconsin, Dept. of Wildlife Ecology, as a nestling on 19 June 1986. He informed me that the kestrel was banded about 9 miles southeast of Atlanta, Montmorency County, Michigan, and was one of five (4 males, 1 female) nestlings banded in a nest box.

Mr. Postupalsky had banded an Osprey (*Pandion haliaetus*) that I had secured at Sewanee on 11 April 1968 (*Migrant* 40:63, 1969). He stated that prior to this kestrel recovery, three of his banded Bald Eagles (*Haliaeetus leucocephalus*), two Ospreys, and one Sharp-shinned Hawk (*Accipiter striatus*) had been recovered in Tennessee. He was happy that, "for once this band recovery report [of the kestrel] did not mean that yet another of my banded birds was dead."

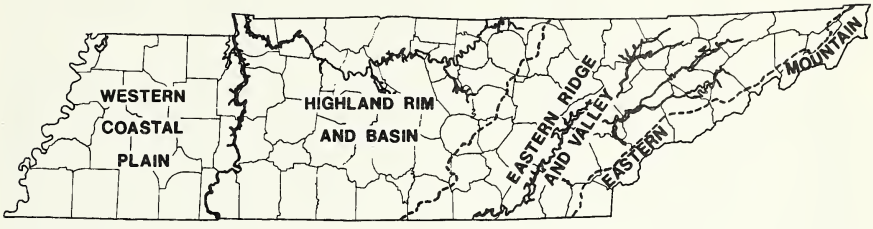
Dr. Harry C. Yeatman, University of the South, Sewanee, TN 37375.

Accepted 15 February 1988.

The Migrant, 59(3):93–104, 1988

THE SEASON

John C. Robinson, Editor



SPRING: 1 MARCH–31 MAY 1988

The general lack of rainfall became an increasingly important issue this spring. Although rainfall in Memphis was reportedly near normal, significant rainfall deficits were reported from most locations elsewhere in the state. At Nashville, the third driest January–May period ever was recorded. Bird species for which water is a limiting habitat factor will undoubtedly be affected by this drought. The relatively dry conditions have already impacted the management of natural and artificial wetlands, including the managed reservoirs on the Tennessee and Cumberland Rivers.

Observers are requested to submit records of their bird sightings to the appropriate regional compiler by the 12th day following the end of each reporting season. The county in which each bird sighting was made should be specified for ALL records. When more than one individual of a species is observed in a multi-county area, the exact number of birds found in *each* county should, when possible, always be provided to the regional compiler.

Ornithologically, I considered this spring to be one of the more exciting spring seasons Tennessee has had in some time. Many early arrival and late departure dates were set for a number of common migrant species. In addition, numerous rare and very rare birds were found. Franklin's Gulls were reported from west, middle and east Tennessee. The first adequately documented Wilson's Plover in Tennessee was found in mid-April, and the second state record of a Common Black-headed Gull occurred in early May. Caspian and Forster's Terns arrived earlier than usual, and the first Eastern Mountain Region Tricolored Heron was discovered in Carter Co. Alder Flycatchers were reported from middle and west Tennessee. A Northern Saw-whet Owl nest record from Claiborne Co. was apparently the first positive breeding evidence ever recorded in Tennessee for this species. Other significant sightings made this spring are too numerous to mention here. But read on—the following text contains many important records!

As a printing aid, the following abbreviations are used in the text: ad—adult; EOP—end of period; ers—earliest reported sighting; im—immature; in.—inch; lrs—latest reported sighting; max—maximum 1-day count during period; m. ob.—many observers; NWR—National Wildlife Refuge; ph—photographs; SBC—Spring Bird Count; S.P.—State Park; yg—young; *—documented record; **—specimen record.

WESTERN COASTAL PLAIN REGION—The spring season produced early

sightings particularly among wading birds. Gulls were observed in greater numbers than in previous years. Passerine migration occurred in a timely manner, and flycatcher species were well represented. Of particular interest are the 4 Bald Eagle nests with 7 young. Three nests are in the Reelfoot area and 1 is in Benton County. A Northern Saw-whet Owl was treated and released. Climatic conditions were not unusual with temperatures and rainfall within average ranges.

Loon–Falcon: Common Loon: 17 Mar/29 May (10/1) PLS (JCR), max/lrs. Pied-billed Grebe: 1 May (1 pair) REL (RPF). Horned Grebe: 17 Mar (83) PLS, max, and 2 Apr (1) PLS (JCR). American Bittern: 13 Apr (1) S of Savannah, Diamond Is. Rd., HDC (DJS); 19, 22 May (1) ESL (JRW). Great Blue Heron: 21 May (8) Lower HNWR (MLB, et al.). Great Egret: 27 Mar (1) TN 57, Hardeman Co. (William B. Fowler); 21 May (12) Lower HNWR (MLB, et al.). Snowy Egret: 21 May (1) Lower HNWR (MLB, et al.). Cattle Egret: 24 Apr (77) Fort Pillow Prison Farm, LDC, the only flock reported this season in region (BBC, LCC). Black-crowned Night-Heron: 6 Mar (1) MEM (CHB, JRW), ers; 7 Mar (1) MLK (CHB, DPB, MGW); 8 Mar (1) ESL (DAD, JRW); 10 Mar (1 ad, 1 im) MEM (BBC, LCC); 20 Mar (2) MLK (CHB, DPB, MGW). Yellow-crowned Night-Heron: 7 Mar (1) MEM (James E. Waldron), ers; 17 Apr–EOP (10) ESL (CHB, VBR, MGW); 29 May (4 ad) 3.2 km S of Bells, HYC (JCR). Ruddy Duck: (present through EOP) Robco Lake, SBC (BBC, LCC, JRW). Osprey: 3 Apr (1) SFP (Mike Hughes). Mississippi Kite: 8 May (1 kettle of 84) SFP (JRW) and (5) MEM (MTOS); 11 May (19) President's Island, SBC (Jo L. Levy, Dwight Miller) and (1 nest, 2 yg) MEM (MGW). Bald Eagle: Spring 1988 (3 nests, 7 yg) REL (Bob Hatcher); it is not known at this time whether any of the ad birds are the result of the hacking program started in 1980; 19 Apr (2 ad, 1 yg) Eagle Creek, Tennessee NWR, Benton Co.—this is the third time this site has produced an eaglet (Ed Britton, Jerry Armstrong, U.S. Fish and Wildlife Service). Peregrine Falcon: 26 Apr (1 female) ESL (JRW).

Sora–Tern: Sora: 7 May (3) ESL (JRW, et al.). Black-bellied Plover: 7, 8 May (2, 1) ESL (JRW, DAD); 21 May (1) Lower HNWR (MLB, et al.). Lesser Golden-Plover: 12, 13 Mar (175, 65) PEF (GRP, MGW); 13 Mar (50) ESL (JRW); 16, 23 Mar (32, 45) PEF (Sue C. Ferguson, Noreen M. Smith, Barbara Wilson, VBR, HBD). WILSON'S PLOVER: 17 Apr (1) ESL (*MGW, VBR, Mike Hughes); first acceptably documented state record—accepted by State Certification Committee in May 1988. Semipalmated Plover: 5, 27 May (8, 2) ESL (CHB, VBR, MGW). Black-necked Stilt: 8 Apr–EOP (4) ESL (CHB, VBR, MGW), nesting attempts failed. Greater Yellowlegs: 2–13 Apr (up to 16) ESL (CHB, VBR, MGW). Lesser Yellowlegs: 2 Apr–22 May (up to 52) ESL (CHB, VBR, MGW). Solitary Sandpiper: 2 Apr–10 May (up to 27) ESL (CHB, VBR, MGW). Spotted Sandpiper: 2 Apr–EOP (up to 13) ESL (CHB, VBR, MGW); 21 May (2) HNWR (MLB, et al.). Upland Sandpiper: 9 Apr (5) PEF (MTOS). Semipalmated Sandpiper: 17 Apr–27 May (up to 416) ESL (CHB, VBR, MGW), max. Western Sandpiper: 17 Apr (1) ESL (CHB, VBR, MGW), ers. White-rumped Sandpiper: 14, 22, 27 May (5) ESL (VBR, MGW); 28–30 May (24–6) ESL (JRW). Baird's Sandpiper: 21, 24 Apr (1) ESL, ers, and 5–20 May (1) ESL (JRW). Pectoral Sandpiper: 2 Apr–EOP (up to 826) ESL (CHB, VBR, MGW). Stilt Sandpiper: 13 Apr–14 May (4) ESL (VBR, MGW). Wilson's Phalarope: 28 May (1 female) ESL (JRW). McKellar Lake in MLK hosted a large concentration of gulls. The lake is located in the western part of SBC and empties by way of a channel into the Mississippi River. The following gull records were from this area. Ring-billed Gull: 5 Mar (2,700) (JRW); 19 Mar (1,200) (Murray Gardler); 20 Mar (1,500) (CHB, DPB, MGW). FRANKLIN'S

GULL: 5 Mar (3) (JRW); 19 Mar (6) (Murray Gardler); 20 Mar (3) (CHB, DPB, MGW); 10, 19 Apr (1) (JRW). Bonaparte's Gull: 5 Mar (250) (JRW); 19 Mar (600) (Murray Gardler); 20 Mar (1,000) (CHB, DPB, MGW); 19 Apr (75) (JRW). Least Tern: 21 May (50) Lower HNWR (MLB, et al.).

Owl–Bobolink: Northern Saw-whet Owl: 18–22 Mar (1) MEM, taken to Memphis Zoo for observation, released in Ohio in May (fide MGW). Olive-sided Flycatcher: 10 May (1) ESL (JRW, CHB, VBR). ALDER FLYCATCHER: 19 May (1) ESL (JRW), rarely reported in region. Willow Flycatcher: 19, 21, 28 May (1, 2, 2) ESL (JRW); 29 May (1) Beaverdam Creek, HNC (JCR). Least Flycatcher: 10 May (1) ESL (JRW, CHB, VBR); 16, 17, 27 May (1) MEM (CHB). Scissor-tailed Flycatcher: 30 May (1) S-SE of Eastview, W of Hwy 45, MNC (CPN). Brown Creeper: 29 Apr (3–4) Cranetown at REL, LKC (RPF). Warbling Vireo: fairly common locally with a max. of 19 on Mud Island and 10 at ESL and Robco Lake; singles were noted at REL, FPP and NE Decatur Co. (BBC, LCC). Philadelphia Vireo: 17 Apr (1) ESL (JRW, DAD); 7 May (1) Overton Park, SBC (Richard Whittington). Cape May Warbler: 8 May (2) ESL (JRW, DAD). Cerulean Warbler: 24 Apr (1) FPP (BBC, LCC); 8 May (9) SFP (MTOS); 18 May (1) SFP (HBD, CHB). Prothonotary Warbler: 30 Mar (1) Lake Lipscomb, DeSoto Co. MS (James Ewart); 3 Apr (1) Wolf River, NW of Moscow, Fayette Co. (BBC, LCC). Swainson's Warbler: 24 Apr (1) FPP (BBC, LCC); 4 May (5) HNWR (HBD, et al.); 8 May (11) SFP (MTOS); 21 May (2) Powell Rd., HNWR (MLB, et al.). Northern Waterthrush: 11 May (1) REL (HBD, et al.). Mourning Warbler: 7 May (1 male) MEM (CHB); 10 May (1 male) Coffey Grounds, MEM (LCC). Dickcissel: 21 Mar (1) MEM (Susan McWhirter, MGW). Bachman's Sparrow: 25 Mar–EOP (3) 3.2 km S of Burnt Church community, HDC; 13 Apr (11 ad, 2 yg) Bruton Branch Recreation Area, HDC—this is the same location as reported in 1987 (DJS); 7 May (1) 4.8 km SE of Silerton, CST and (1) 1.1 km SW of Cave Springs Church and 6.4 km E-SE of Silerton, CST (BBC, LCC). Lark Sparrow: 28 May (1) 3.2 km S of Burnt Church community, HDC (DJS); 30 May (1) at 2 different locations about 1.6 km apart E of Hwy 45, MNC (CPN). Grasshopper Sparrow: 1, 2 Apr (3, 1) ESL (Mike Hughes), ers; 21 May (2) Lower HNWR (MLB, et al.); 29 May (1) near Beaverdam Creek, HNC (JCR). Lincoln's Sparrow: 28 May (1) ESL (JRW), lrs. White-crowned Sparrow: 1 Apr (32) ESL (VBR). Bobolink: 31 May (1 male) Kiwanis Lake, Tiptonville, LKC (CPN), lrs.

Locations: CST—Chester Co.; ESL—Ensley sewage lagoons, Shelby Co.; FPP—Fort Pillow S.P., Lauderdale Co.; HDC—Hardin Co.; HNC—Henry Co.; HNWR—Hatchie National Wildlife Refuge, Haywood Co.; HYC—Haywood Co.; LDC—Lauderdale Co.; LKC—Lake Co.; Lower HNWR—Lower Hatchie National Wildlife Refuge, Lauderdale Co.; MCN—McNairy Co.; MEM—Memphis, Shelby Co.; MLK—Martin Luther King (Riverside) Park, Shelby Co.; PEF—Penal Farm, Shelby Co.; PLS—Paris Landing S.P., Henry Co.; REL—Reelfoot Lake; SBC—Shelby Co.; SFP—Shelby Forest S.P., Shelby Co.

Martha G. Waldron, 1626 Yorkshire Drive, Memphis, TN 38119.

HIGHLAND RIM AND BASIN REGION—Dry conditions dominated the weather in the region for the fourth consecutive spring. Rainfall totals in Nashville for March, April and May were 1.75, 2.09 and 1.86 in., respectively, resulting in a seasonal rainfall deficit of 8.31 in. Monthly totals at Cross Creeks NWR were 3.42, 1.21 and 1.90 in. May was hotter than normal, while March and April temperatures varied quite a bit, but were about normal overall.

A small loon on Percy Priest Lake in March would normally have received most of the attention in a synopsis of regional rarities. However, the TOS Certification Committee did not confirm this sighting, so it must await future discussion. Plenty of rare birds did occur in middle Tennessee this spring despite poor weather conditions, among them an Eared Grebe, a Glossy Ibis, several Common Moorhens, an early Franklin's Gull, several Alder Flycatchers, many Bewick's Wrens, some well-described Connecticut and Mourning Warblers, and Bachman's, Lark and Sharp-tailed Sparrows. The region's first well-documented Western Meadowlark was recorded, though reports of this species have surfaced in the past. Also new to the region was a Painted Bunting in Lawrence County. Surely a remarkable sight must have been the small flock of three scoter species observed on Cheatham Lake in late April. Details on all of the above species were provided by the observers. Quite a few early and late dates of arrival and departure were set this spring, and some impressive maximum data were submitted. All in all, it was a good season in spite of dry conditions.

This report represents quite a condensation of the total number of records submitted. Probably fewer than 20% of all records received are noted below. This fact should not, however, discourage regional observers from sending in data, since this information helps the compiler convey the "big picture" and since unpublished records have archival value and may be useful in future research conducted on the birds of the region. Therefore, observers are encouraged to submit as many records as possible each season. A recommended minimal goal might be for each observer to submit 25 records per season, preferably on green cards (available free from Robert M. Hatcher, TWRA, Box 40747, Nashville, TN 37204). Many thanks to those noted below, as well as to those who submitted data which do not appear below.

Loon–Ibis: Common Loon: 6 Mar (40) PPL (county?) (CGD), max; 11 May (1) CCNWR (JCR, DWB), lrs. Pied-billed Grebe: 2 Apr/13 May (16/2) PUC (SJS), max/lrs. Horned Grebe: 18 Apr (3) PUC (SJS), lrs. EARED GREBE: 12 Mar (1) PPL, DVC (*RLK), 6th NA record, following 2 last fall. Double-crested Cormorant: 7–8 May (36) WLC on Lebanon SBC (fide RVM), max. American Bittern: 7 reports 17 Apr–19 May in CHC, LWC, SUC and SWC; more than the usual number. Least Bittern: 1–19 May (up to 3) BCWMA (DWB, JCR). Great Egret: 8 reports 25 Mar–EOP in DVC, PUC, SUC, SWC; about normal. SNOWY EGRET: 29 Mar (1, ph) PUC (SJS), ers and earliest ever in state; 4 May (1) MC (TJW), only other report. Little Blue Heron: 6 reports 17 Apr–27 May in LWC, SUC, SWC. Cattle Egret: 5 May (3) DIC (DWB); 21 May (15) LWC (CAS); only reports. Green-backed Heron: 26 Mar (1) RDL (MHI), ers. Yellow-crowned Night-Heron: 19 May (10 ad) BCWMA (JCR), max. GLOSSY IBIS: 10–11 May (1 ad) BAR (DWB, *JCR), first verified SWC record and one of very few well-documented in state.

Swan–Duck: Tundra Swan: 12 Mar (1 im) Arrow Lake, MUC (O. Bedford Lochridge); only report. Greater White-fronted Goose: 3/6 Mar (2) CCNWR (JCR/DWB), only reports. Green-winged Teal: 20 Apr (pair) BAR (DWB), lrs. American Black Duck: 30 Apr–22 May (1) Lewis Pond, SUC (JPC, DTC), lrs. Blue-winged Teal: 31 May (1) SUC (DTC, JPC), lrs (breeding evidence seen?). Northern Shoveler: 4 May (6) PUC (SJS), lrs. American Wigeon: 11 May (1) BAR (DWB), lrs. Redhead: 17 Apr (2) CCNWR (CAS), lrs. Ring-necked Duck: 31 May (1) GSP (DTC, JPC), lrs. Lesser Scaup: to EOP (1, possibly injured) RDL (CAS, m. ob.), lrs. BLACK SCOTER: 29 Apr (1 male) near PAR (*CGD), first NA spring record and 6th overall. White-winged Scoter: 29 Apr (6) near PAR (CGD); only report.

Surf Scoter: 29 Apr (3) near PAR (CGD), only report. Bufflehead: 9 May (1) RDL (CAS), lrs. Red-breasted Merganser: 4 May (1) PUC (SJS), lrs. Ruddy Duck: 1 May (2) Franklin Reservoir, WMC on NA SBC (SJS, Jan C. Alexander, Anne and Robert Nixon), lrs.

Eagle–Merlin: Bald Eagle: 19 Apr (1 im) Laurel Hill Lake, LWC (DJS); 30 Apr (1) CHC on NA SBC (CGD). Northern Harrier: 4 May (1 ad male) CCNWR (DWB), lrs. Sharp-shinned Hawk: 16 reports 6 Mar–30 May. Cooper's Hawk: 17 reports. Broad-winged Hawk: 29 Mar (1) PUC (BHS), ers; 16 Apr (17) PUC (BHS), max. Rough-legged Hawk: 2 Apr (2) Ft. Campbell, MTC (DWB), lrs. Golden Eagle: 16 Mar (1 im) CCNWR (TJW), only report. Peregrine Falcon: 22 Mar (1) SHB (Mark S. Hackney); 27 Apr (1) NASH (WCO); 5 May (1 ad/1 ad) HOC/BAR (DWB); only reports. Merlin: 21 Mar (1) PPL (county?) (Andrew Zipperer), only report.

Turkey–Crane: Wild Turkey: 3 Mar/8 May (1/1) BAH (RWS); 13 Mar (5) WSB (DWB); 4 Apr (7) CFC (Joseph Martinez, fide FNM); 5, 13, 19 May (1) CFC (Philip L. Medley); only reports. Ruffed Grouse: 20 Mar/19 May (1/1) BAH (RWS), only reports; state forestry personnel reported this species on Short Mt., Cannon Co. in recent past (fide SJS): that area and others nearer the escarpment of the Cumberland Plateau need checking. Virginia Rail: 13 Apr (1) MOP (DJS), ers; 4 reports 1–14 May in SUC and SWC. Sora: 6 May (37) SWC (DWB, JCR), max and new state max as well; many reports. COMMON MOORHEN: 7–14 Apr (1 ad) MC (MHM, CGD, m. ob.); 1–6 May (1 ad) SWC (DWB, JCR); 4–22 May (1) GSP (JPC, DTC, m. ob.); more than usual number of reports. Sandhill Crane: 2–20 Mar (865+) PIC (RCH); 5 Mar (125) Beaver Hill, OVC (Francis C. Baker, fide RCH); 5 Mar (30) BAH (RWS); 5 Mar (28) Jackson Co. (BHS); 8 Mar (235) Standing Stone S.P., OVC (Candy Swan); 19 Mar (8) Brush Creek, SMC (LDR); 21 Mar (5) Robertson Co. (RPF); a well-reported migration for this species.

Plover–Phalarope: Black-bellied Plover: 5 May (1) BAR (DWB), only report. Lesser Golden-Plover: 31 May (1) Green's Lake, SUC (JPC), lrs and new NA late spring date. Semipalmated Plover: 17 Apr (5) CCNWR (CAS), ers and very early; 15 May (100+) GSP (WCO), max. Killdeer: 2 Mar (368) CCNWR (JCR), max. American Avocet: 14–16 May (1) GSP (DTC, JPC), only report. Greater Yellowlegs: 27 May (1) CCNWR (JCR), lrs and very late. Lesser Yellowlegs: 27 May (1) SUC (DTC, JPC), new NA late spring date; 30 May (1) CCNWR (JCR), lrs. Solitary Sandpiper: 6 May (36) SWC (DWB), max; 22 May (1) Dunbar Cave S.P., MTC (JCR), lrs. Willet: 26 Apr/10 May (3/10) ROB (DJS), only reports. Upland Sandpiper: 1 Apr (2) SHB (MHI), ers; 13 Apr (5) Lawrenceburg, LWC (DJS), max; 1 May (1) MC (JCR); 5 May (3) Tennessee City, DIC (DWB), lrs; only reports. Semipalmated Sandpiper: 1 Jun (8) CCNWR (JCR), lrs. Western Sandpiper: 26 Apr–27 May (1-3) SUC (DTC, JPC); 7–15 May (up to 3) ROB (DJS); only reports. White-rumped Sandpiper: 7–15 May (up to 3) ROB (DJS), first LWC record; 9 May (1) near Macedonia, WHC (BHS); 24 May (25) CCNWR (JCR), max; 15–17 Jun (1) CCNWR (JCR), lrs. Baird's Sandpiper: 7 May (1) ROB (DJS), only report. Pectoral Sandpiper: 27 Feb (2) ROB (DJS, David C. Chaffin), ers; 26 May (2) BAR (DWB), lrs; see addendum. Stilt Sandpiper: 15 May (4) ROB (DJS, MAB), only report. Short-billed Dowitcher: 10 May (1, ph) PUC (SJS), only report with details. Wilson's Phalarope: 11 May (1) CCNWR (TJW, JCR), first SWC spring record; only report.

Gull–Woodpecker: FRANKLIN'S GULL: 13–24 Mar (1 ad) Dover, SWC (JCR, DWB), early; only report. Bonaparte's Gull: 30 Apr (2) GSP on NA SBC (DTC, JPC), lrs. Ring-billed Gull: 2 Mar (350) SWC (JCR), max. Caspian Tern: 26 Mar (1) PPL (county?) (CAS), new NA early spring date. Forster's Tern: 26 Mar (15)

PPL (county?) (CAS), new NA early spring date; 23 May (3) CCNWR (JCR), lrs. Black Tern: 11 May (1) CCNWR (JCR), only report. Black-billed Cuckoo: 4 reports 27 Apr–5 May in DVC, HOC, MUC. Common Barn-Owl: 16–17 Apr (1) CHC (MHI), only convincing report. Chuck-will's-widow: 20 Apr (1) CFC (FNM), ers. Whip-poor-will: 5 Apr (1) LBL (DWB), ers. Chimney Swift: 29 Mar (1) CLA (EJW), ers. Ruby-throated Hummingbird: 27 Mar (1) CLA (EJW), ers. Red-headed Woodpecker: 30 Apr (11) CHC on NA SBC (CGD, m. ob.), max.

Flycatcher–Creeper: Olive-sided Flycatcher: 1 May (1) RDL on NA SBC (CAS); 4 May (1) HOC (DWB); only reports. Acadian Flycatcher: 13 Apr (1) CLA (EJW), ers. ALDER FLYCATCHER: 11 May (1 calling) CCNWR (JCR, DWB), first verified SWC record; 14 May (1 calling) LBL (JCR), second SWC record; 19 May (1 calling) CCNWR (JCR), third SWC record; 29 May (1 calling) CCNWR (DWB), you guessed it, fourth SWC record. Least Flycatcher: 5 reports 29 Apr–17 May in DVC, LWC, WMC. Great Crested Flycatcher: 9 Apr (1) WAP (DFV), ers. Eastern Kingbird: 7 Apr (1) CFC (Quincy Stykes), ers. Tree Swallow: 5 Mar (5/13) MOP/CCNWR (fide ARL/DWB, JCR), ers. Bank Swallow: 26 May (3) PUC (SJS), lrs. Cliff Swallow: 30 Apr (1,200) CHC on NA SBC (CGD, m. ob.), max. Barn Swallow: 12 Mar (1) PPL, DVC (RLK, JCR), ers. Brown Creeper: 22 Apr (1) WSB (DWB), lrs.

Bewick's Wren: 7 Mar (2) Choctaw Trail, WMC (Elaine Borders), ers; 29 Mar–EOP (pair with 5 yg) WLC (Earline C. Berry); 5 Apr/7 May (1) Rock Springs Rd., RUC (TJW); 10 Apr–4 May (1) Erin Fire Tower, HOC (DWB); 16 Apr (1) near Loretto, LWC (DJS); during most of May (1) Brush Creek, SMC (LDR); 7–8 May (5) WLC on Lebanon SBC (fide RVM); 12 May (1) E of Lebanon, WLC (RVM); 14 May (1) Hurricane Creek Rd., SWC (JCR); 17 May (3) Westvaco clearcut on Hwy 18, SWC (DWB); 29 May (1) E WMC (SJS); 31 May (4/3) Westvaco clearcut on Hwy 18, SWC/MTC (DWB); a good number of reports.

Wren–Waxwing: House Wren: 27 Mar (1) NASH (C. Rowan Debold), ers. Winter Wren: 27 Mar (1) WMC (KAG), lrs. Marsh Wren: 1 May (1) BCWMA (JCR), ers; 4 May (1) PUC (BHS, SJS); 6 May/19 May (5/5) BAR/BCWMA (DWB/JCR), max/max and lrs. Blue-gray Gnatcatcher: 24 Mar (1) CFC (FNM), ers. Veery: 25 May (1) RDL (CAS), lrs. Gray Catbird: 25 Mar (1) Pennington Bend, DVC (MLM), ers. Water Pipit: 1 May (1) SHB (JCR), lrs. Cedar Waxwing: many birds present at EOP, suggesting more than usual regional nesting might occur during Summer 1988.

Vireo–Warbler: White-eyed Vireo: 6 Mar (1) WAP (DFV), ers and new NA early spring date. Yellow-throated Vireo: 5 Apr (1) CLA (AHH), ers. Philadelphia Vireo: 25 Apr (1) N of Dover, SWC (DWB), only report. Blue-winged Warbler: 10 Apr (1) PUC (SJS), ers. Orange-crowned Warbler: 11 Apr (1) RDL (WCO); 19/23 Apr (1/1) LWC (DJS); 27 Apr (1) RDL (WCO); only reports. Northern Parula: 2 Apr (1) Lewis Co. (MHM), ers. Yellow Warbler: 30 Mar (1) Narrows of the Harpeth, CHC (MLM), ers and new NA early spring date. Chestnut-sided Warbler: 30 May (1) RDL (CAS), lrs. Prairie Warbler: 4 Apr (1) Long Hunter S.P., DVC (MLM), ers; ties NA early spring date. Palm Warbler: 26 May (1) WHC (BHS), late; 4 Jun (1) MC (DFV), lrs and new NA late spring date. Bay-breasted Warbler: 18 Apr (1) Oaklands Park, RUC (TJW), ers and new NA early spring date. Blackpoll Warbler: 19 Apr (1) PUC (BHS), ers; 26 May (1) PUC (SJS), lrs. Worm-eating Warbler: 9 Apr (1/1) PIC/SWC (RCH/JCR), ers. SWAINSON'S WARBLER: 23–30 Apr (1) Ashland City Marsh, CHC (CGD, m. ob.), only report; same area where a bird of this species was detected last spring; very few NA records. Louisiana Waterthrush: 22 Mar (1) Grasmere, NASH (Portia R. McMillan) ers. Connecticut Warbler: 14 May (1 male) LBL (JCR), only report (good

details). Mourning Warbler: 10 May (1) LWC (DJS), ers; 10–30 May (1–2) RDL (TJW, CAS, WCO, m. ob.); 14 May (1) SWC (JCR); good details on these reports. Canada Warbler: 11 May (about 10) RDL (fide Ann T. Tarbell), max.

Tanager–Junco: Summer Tanager: 4 Apr (1) Dunbar Cave S.P., MTC (AHH), ers; very early. Scarlet Tanager: 3 Apr (1) Woodland Park, MUC (ARL), ers; very early. Rose-breasted Grosbeak: 24 Apr (1/1) WAP/RDL (DFV/Mary A. Zimmerman), ers. PAINTED BUNTING: 7 May (1 male) LWC (*DJS, MAB), first regional record. BACHMAN'S SPARROW: 24 Apr/14 May (2/2) SWC (DWB, *JCR/*JCR), only reports. Chipping Sparrow: 6 Mar (1) CFC (FNM), ers. Vesper Sparrow: 17 Apr (1) LBL (CAS), lrs. Lark Sparrow: 17 Apr (1) WMC (DFV, KAG); 11–28 May (pair with yg in nest) Simmons Bluff Rd., WLC (RVM, TJW), only reports. Grasshopper Sparrow: 17 May (5) SWC (JCR), high for SWC. SHARP-TAILED SPARROW: 1 May (1) SHB (*JCR, DJS), only report. Fox Sparrow: 3 Apr (1) BAH (RWS), lrs. Swamp Sparrow: 19 May (1) BCWMA (JCR), lrs; very late. White-throated Sparrow: Mar (80) Pennington Bend, DVC (MLM), max. White-crowned Sparrow: 15 May (2) SWC (JCR, DWB), lrs. Dark-eyed Junco: 5 May (1) CLA (AHH), lrs.

Meadowlark–Grosbeak: WESTERN MEADOWLARK: 5 Mar (1 singing) CCNWR (*JCR, DWB), first well-supported regional report. Pine Siskin: 26 Mar/2 Apr (150+/200+) BAH (RWS), indicative of the high numbers in the region this spring; the following county late dates show the uniform departure of this species from the region: 7 May CFC (Chloe Peebles); 11 May MTC (EJW); 12 May PIC (RCH); 13 May SUC (DTC, JPC); 13 May PUC (RWS); 14 May SWC (JCR). Evening Grosbeak: 30 Mar (2) Woods Reservoir, Franklin Co. (Carol Barr); 30 Mar (4) Erin Fire Tower, HOC (DWB); only reports.

Addendum: Pectoral Sandpiper: 31 May 1987 (7) MUC (George R. Mayfield, Jr., William N. Jernigan), very late.

Locations: BAH—Barnes Hollow, Putnam Co.; BAR—Barkley Wildlife Management Area, Stewart Co.; BCWMA—Bear Creek Waterfowl Management Area, Stewart Co.; CCNWR—Cross Creeks National Wildlife Refuge, Stewart Co.; CFC—Coffee Co.; CHC—Cheatham Co; CLA—Clarksville, Montgomery Co.; DIC—Dickson Co.; DVC—Davidson Co.; GSP—Gallatin Steam Plant, Sumner Co.; HOC—Houston Co.; LBL—Land-Between-the-Lakes, Stewart Co.; LWC—Lawrence Co.; MC—Metro Center, Davidson Co.; MOP—Monsanto Ponds, Maury Co.; MTC—Montgomery Co.; MUC—Maury Co.; NA—Nashville Area (includes all of Cheatham, Davidson, Robertson, Rutherford, Sumner, Williamson and Wilson Counties, as well as parts of Dickson and Trousdale Counties); NASH—Nashville; OVC—Overton Co.; PAR—Pardue's Pond, Dickson Co.; PIC—Pickett Co.; PPL—Percy Priest Lake, Davidson, Rutherford and Wilson Counties; PUC—Putnam Co.; RDL—Radnor Lake State Natural Area, Davidson Co.; ROB—Robertson Pond, Lawrence Co.; RUC—Rutherford Co.; SHB—Shelby Bottoms, Davidson Co.; SMC—Smith Co.; SUC—Sumner Co.; SWC—Stewart Co.; WAP—Warner Parks, Davidson Co.; WHC—White Co.; WLC—Wilson Co.; WMC—Williamson Co.; WSB—Wiley's Spring Bay, Stewart Co.

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EASTERN RIDGE AND VALLEY REGION—Drought conditions worsened during this season, with the 3 major reporting stations receiving only 50–60% of the normal rainfall. March was the driest month, with Chattanooga getting 1.8

in. (4.5 in. deficient) and Johnson City getting 1.5 in. (2.7 in. deficient). Precipitation during April and May increased slightly, with these two stations receiving over 5 in. each (still 2–3 in. below average) for that 2-month period. Although a few cold snaps tempered things a bit, it was an "early spring," with both March and April being warmer than normal. May was slightly cooler than normal. One result of the early warmth was that many trees leafed out earlier than usual, obscuring visibility of woodland birds. Because of the drought, water levels in the upper lakes were very low, except for relatively small Boone Lake. Near Chattanooga, Chickamauga Lake reached full pool in late April.

Except for a few rarities, this season was described by most respondents as rather uneventful. With the early warm temperatures came some earlier-than-normally-expected migrants; but then other species were late. Most waterfowl species moved through early and in low numbers. Shorebirds passed through on time, but in slightly reduced numbers—at least partly due to reduced habitat. Few waves of passerines were reported, but there were few fronts to ground them. The biggest surprises were a Common Black-headed Gull at Kingston Steam Plant and a pair of Northern Saw-whet Owls with 2 young in Claiborne County. Also notable were Marbled Godwit, Franklin's Gull and a lingering Red-necked Grebe. The increases in cormorant sightings and the continued growth of the Greater Sandhill Crane population were encouraging.

The first reports from the new Cumberland County Chapter appear here. Welcome!

Loon–Heron: Common Loon: 6–20 Apr (1–4) BOL (RLK, BIC); 12 Apr/12 May (24/4) Tellico Lake, Monroe Co. (JAK, Wesley K. James); 19 Apr (8) CRL (RLK, BIC, JWB); 24 Apr (4) CHL (ESK), last there. Pied-billed Grebe: 4 May (1) AUS (RLK), lrs. Horned Grebe: 24 Apr (2) CHL (ESK), lrs. RED-NECKED GREBE: 1 Mar (1) CHL (AMJ), holdover from last season. Double-crested Cormorant: 6 Apr (9) BOL (RLK); 9 Apr (several) KNX (Marcia L. Davis, et al.); 19 Apr (8) CRL (RLK, BIC, JWB); 24 Apr (1) AUS (RLK), (15) KNC SBC (KTOS); 8–9 May (3) AUS (RLK); 11 May (4) Fort Loudon Lake, KNC (JAK); 16 May (1) BOL (RLK); 24 May (2) Douglas Lake, JEC (JAK); good showing (no reports from CHA area?). American Bittern: 12 Apr (1) CHA (RJH); 25 Apr (1) AUS (RLK); only reports. Least Bittern: 5 Apr (1) AMM (RJH), only report. Great Egret: 1–12 Apr (1–6) SAB (KHD, LHD); 16 Apr–17 May (1–2) AUS (RLK, BIC); 24 Apr (1) KNC SBC (JAK); 24 May (3) Douglas Lake, JEC (JAK). Little Blue Heron: 2–3 Apr (1) W KNC (BAF); 13 Apr (1) AUS (BIC). Cattle Egret: 24 Apr (1) KNC SBC (KTOS). Black-crowned Night-Heron: 12 Apr/26 May (1/2) BOL (BIC/RLK); 13–18 Apr (1) JNC (FJA). Yellow-crowned Night-Heron: 2 Apr (3) Brainerd Levee, CHA (KHD, LHD), ers at only site reported.

Waterfowl: Canada Goose: many yg seen in JNC area (LHTOS). Blue-winged Teal: 19 Apr (140+) CRL (RLK, BIC, JWB), max. Northern Shoveler: 18 Apr (39) BOL (RLK); 19 Apr (88) CRL (RLK, BIC, JWB); high numbers for NE Tennessee. American Wigeon: 25 Apr (12) AUS (RLK), lrs. Canvasback: 13 Mar (3) RAC (AMJ), only report. Greater Scaup: 13 Mar (80) RAC (AMJ); 20/27 Mar (160/67) CHL (KHD, LHD), max/lrs. Lesser Scaup: 18 Apr (9) BOL (RLK), last migrants; 1 male through EOP in JNC (RLK, MD). White-winged Scoter: 20–27 Mar (1–2) CHL (KHD, LHD, RJH). Hooded Merganser: 15 Apr (1) BOL (JWB), lrs. Common Merganser: 5 May (2) BOL (BIC), only report. Red-breasted Merganser: 27 Mar (26) CHL (KHD, LHD); 1–28 Apr (1–3) BOL (RLK); 24 Apr (2) KNC SBC (KTOS). Ruddy Duck: 19 Apr (5) CRL (RLK, BIC, JWB), lrs.

Vulture–Crane: Black Vulture: 19 Mar (40 at roost) Meigs Co. (KHD, LHD); 24 Apr (32) KNC SBC (KTOS), high number for area; continued increase in number of sightings in the JNC area (LHTOS). Turkey Vulture: 24 Apr (80) KNC SBC (KTOS), high number for area. Osprey: 5 Mar (1 at nest) HRA (KHD, LHD, et al.), ers; 9 Apr–13 May (several sightings) JNC area (LHTOS); 22 Apr (1) CUC (RSD, et al.). Bald Eagle: 13 Mar (1 im) BOL (RLK); 18 Apr (1 ad) SAB (LHD); only reports. Sharp-shinned/Cooper's Hawks: 3/8 reports in JNC area (LHTOS). Golden Eagle: 1 Mar (1 ad) SIM (J. Thomas Patton); 5 Mar (1 im) HRA (CHA Chapter TOS); see comments last season. Wild Turkey: 6 May (2) CUC (RSD, et al.). Virginia Rail: 5 Apr (1) AMM (RJH), only report. Sora: 5 Apr (1) AMM (RJH); 8 May (1) AUS (RLK); only reports. Sandhill Crane: 20+ reports from over 9 observers in the CHA area totaled 2,384+ cranes (some duplication likely) from 16 Feb to 2 Apr, highlighted by 500 roosting on SAB mudflats on 3 Mar and 700 (in 2 groups in Meigs and Rhea Counties) standing/feeding on 5 Mar ("a very conservative count and the largest number ever observed on the ground in this area") (all fide KHD).

Sandpiper–Tern: Solitary Sandpiper: 24 Mar (1) JNB (RLK), ers; 24 Apr (42) KNC SBC (KTOS), max. Spotted Sandpiper: 30 May (1) AUS (RLK), lrs, late. MARBLED GODWIT: 18 Apr (2) Eagle Bend Fish Hatchery, Anderson Co. (Mike Smith, CPN), not found next day; about 15th state record (the 6th for this region) and only the 3rd in spring. Sanderling: 14 May (1) CHA (LHD, et al.), seldom reported in spring. Western Sandpiper: 21 May (1) KSP (RJH), also scarce in spring. White-rumped Sandpiper: 21 May (1) KSP (RJH); 24 May (2) JEC (JAK); only reports. Dunlin: last seen 26 Mar HRA (KHD, LHD); up to 79 reported earlier in season at this wintering site. Common Snipe: 6/26 Mar (112/139) SAB/HRA (KHD, LHD), max. American Woodcock: 1–2 all period at AUS (RLK, et al.); 1 Mar (3) Moccasin Bend, CHA (RJH); 1–2 Mar (1) SAB (KHD). FRANKLIN'S GULL: 29 Apr (1 ad) KSP (*RLK), 5th regional record. COMMON BLACK-HEADED GULL: 1 May (1) KSP (*DJS), 2nd state record. Bonaparte's Gull: 1–22 Apr (14–30) BOL (RLK, BIC, et al.), max; 12 May (1) BOL (FJA), lrs. Herring Gull: 8 May (1 im) KSP (ARH, RDH), lrs. Caspian Tern: 18–19 Apr (1–2) BOL (RLK, BIC), 3rd local spring record. Forster's Tern: 12 Apr (1) SAB (LHD); 12 Apr (1) BOL (RLK), earliest JNC area by 4 days; 18 Apr (3) BOL (RLK).

Cuckoo–Woodpecker: Black-billed Cuckoo: 8 May (1) Petros, MGC (ARH, RDH), only report. Yellow-billed Cuckoo: 30 Apr (1) GNC (Richard and W. Ruth Nevius), ers. Common Barn-Owl: 8 May (2) JNC (RLK, JWB), at known nest site. NORTHERN SAW-WHET OWL: 8–11 May (2 ad, 2 fledglings, ph) near Speedwell, Claiborne Co. (George W. McKinney, JBO), first breeding evidence outside of high elevations of the Great Smoky Mountains National Park; details to be published. Chimney Swift: 23 Mar (1) JNB (JWB), ers and earliest JNC area by 6 days. Red-headed Woodpecker: 7 Mar (1) Norris Lake, Union Co. (CPN); 11 Mar/15 Apr–6 May (1/5–7) CUC (CPN/RSD, et al.); 19 Apr (1) Grainger Co. Park (RLK, BIC, JWB); 23 Apr (1) JNC (MD); 24 Apr (1) Gray, WGC (FJA); 5 May (1) E Campbell Co. (CPN); 23 May–EOP (pair) Afton, GNC (Daniel J. Neives); 3 sites in W WGC (RLK, BIC); good showing.

Lark–Vireo: Horned Lark: 12 Mar (several pairs) JEC (JAK); 17 Apr (pair) LST (RLK); 13 May (1 singing) JNB (RLK). Purple Martin: 2 Mar (1) KNC (fide JBO), ers. Bank Swallow: 12 Apr (1) BOL (RLK), ers; 29 Apr (30+, at least 15 nest burrows in ash bank) KSP (RLK). Cliff Swallow: 29 Apr (75–80 active nests) I-24 bridge over Sequatchie River, Sequatchie Co. (James T. Tanner), new nesting location. House Wren: 25 May (1, nest building) Hixson, Hamilton Co. (Andrew J. Liner). Winter Wren: 24 Apr (1) JNC (RLK), lrs. Marsh Wren: 25–26 Apr/17

May (1) AUS (RLK); 4 May (1) Tri-cities Regional Airport, Sullivan Co. (BIC); 5 May (1) Doake's Pond, Campbell Co. (CPN). Golden-crowned Kinglet: 16 Apr (2) JNC (RLK), lrs. Ruby-crowned Kinglet: 8 May (1) JNC (RLK), lrs. Blue-gray Gnatcatcher: 30 Mar (1) NOR (CPN), ers. Water Pipit: late dates include 5 May (2) KSP (BHS, Paul Harris); 8 May (12) LST (RLK, JWB); 17 May (1) LST (BIC), lrs and latest JNC area by 12 days. Cedar Waxwing: very common through EOP in N half of region (m. ob.); fewer in CHA area (lrs there 24 May, fide KHD). Loggerhead Shrike: single sightings from BLC, Sullivan Co., WGC (JAK, RLK, BIC); 4 Apr (1, on nest) SAB (KHD). Warbling Vireo: 24 Apr (1) KNC SBC (KTOS), rarely reported there (fide CPN). Philadelphia Vireo: 24 Apr (2) KNC SBC (KTOS). Red-eyed Vireo: 11 Apr (1) NOR (CPN), ers.

Warbler–Grosbeak: BREWSTER'S WARBLER: 8 May (1) MGC (ARH). Orange-crowned Warbler: wintering bird in KNX last seen 20 Mar (Louise F. Fuller); 8 Apr (1) CHA (RJH). Blackburnian Warbler: 5 Apr (1) KNX (BAF), ers. Pine Warbler: 16 May (1 ad feeding yg) BOL (RLK), few JNC area breeding records. Prothonotary Warbler: 26 Apr (1, window kill) JNC (**Mr. and Mrs. Milton Parker); 4/9 May (1) AUS (RLK/BIC), only reports from only JNC area nest site; 5–6 males were present at Rankin Bottoms, Cocke Co. (JAK). Dickcissel: 8–17 May (1–2) LST (RLK, et al.); 17 May (1) BLC (JAK); 24 May (5+) JEC (JAK). Vesper Sparrow: 13 Mar–18 Apr (max of 15 on 27 Mar) AUS (RLK, BIC). Savannah Sparrow: 17 May (1) AUS (RLK), lrs. Grasshopper Sparrow: 17 Apr (1) JNB (RLK), ers. Swamp Sparrow: 8 May (1) AUS (RLK, JWB), lrs. White-crowned Sparrow: 4 May (2) GNC (PHB), late; 8 May (1) WGC (RLK, JWB), lrs. Dark-eyed Junco: 18 Apr (1) BOL (RLK), lrs. Rusty Blackbird: 24 Apr (6) KNC SBC (KTOS), lrs. Red Crossbill: 19–20 Mar (1 male, 1 female) sick birds brought to CHA Nature Center, later died (Linda B. Harris); 10 Apr (5) Oneida, Scott Co. (CPN). Pine Siskin: continued high numbers from winter; last reports include 6 May CUC (RSD, et al.); 10 May KNX (fide CPN); 13 May GNC (PHB); 18 May JNC (LHTOS); 30 May SIM (Jonnie Sue Lyons). Evening Grosbeak: mid-Mar–early Apr KNX (fide CPN); 17 Mar–13 Apr (up to 11) GNC (PHB); 8–29 Apr (2–3) CUC (RSD, et al.); 26 Apr–10 May (up to 20) JNC area (LHTOS); no reports from CHA.

Locations: AMM—Amnicola Marsh, Hamilton Co.; AUS—Austin Springs, Washington Co.; BLC—Blount Co.; BOL—Boone Lake, Sullivan and Washington Cos.; CHA—Chattanooga; CHL—Chickamauga Lake, Hamilton Co.; CRL—Cherokee Lake, Grainger, Hamblen and Hawkins Cos.; CUC—Cumberland Co.; GNC—Greene Co.; HRA—Hiwassee River Area, primarily Meigs Co., but also Bradley, McMinn and Rhea Cos.; JEC—Jefferson Co.; JNB—Jonesborough, Washington Co.; JNC—Johnson City; KNC—Knox Co.; KNX—Knoxville; KSP—Kingston Steam Plant, Roane Co.; LST—Limestone, Washington Co.; MGC—Morgan Co.; NOR—Norris, Anderson Co.; RAC—Raccoon Mountain Pumped Storage Reservoir, Marion Co.; SAB—Savannah Bay, Hamilton Co.; SIM—Signal Mountain, Hamilton Co.; WGC—Washington Co.

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EASTERN MOUNTAIN REGION—Dry weather is the most talked about element from our area this period. March had a rainfall deficit of 2.5 in., and deficits of 1 in. were recorded for both April and May. The cumulative total of rainfall since January 1988 is almost 12 in. below the average; needless to say, things are getting very dry. No noticeable effect on the nesting species has been observed so far.

We had a couple of unusual occurrences during the period: a Tricolored Heron in April in Carter County and the discovery of a Tree Swallow nest in an old motel sign in Butler. This nest fledged 5 young and is only the second confirmed nesting report from the 5-county upper east Tennessee area.

Our early spring waterfowl movement was almost nonexistent and the shorebird flight was about as weak. Flycatchers, thrushes and warblers all had somewhat above average spring flights in the area.

Loon–Hawk: Common Loon: 22–26 May (1–2) WatL (RLK), late and only report during period. Green-backed Heron: 5 Apr (1) Siam Valley, CRC (FJA), ers. TRICOLORED HERON: 1–2 Apr (1) Great Lakes Pond, CRC (RLK, BIC), first local and regional record. Yellow-crowned Night-Heron: 31 Mar (1) Eliz (RLK), ers, nest located on 6 Apr. Canada Goose: 1 Mar–10 Apr (75+) WatR (LHTOS), 4 birds with yellow neck collars that were banded in North Carolina; good nesting results in the area this spring. Green-winged Teal: 19 Mar (6) WatR (CFW), only report in area. American Black Duck: 10 Mar (2) RIL (FJA), lrs. N. Pintail, Gadwall, N. Shoveler, Canvasback, Redhead and Common Goldeneye: no sightings reported during the entire period, very unusual. Ring-necked Duck: 13 Mar (60) WatL and 22 Apr (1) WibL, lrs (RLK). Greater Scaup: 24 Apr (1) Erwin, Unicoi Co. (JWB), lrs. Bufflehead: 7 May (3) WibL (LHTOS), lrs. Hooded Merganser: 3/6 Mar (5/10) RIL (CFW); 18 Apr (3) WatR (BIC), lrs. Black Vulture: 18 Mar (18) Hampton, CRC (GWS); this species on the increase in our area. Osprey: 31 Mar–8 May in Eliz area (LHTOS). BALD EAGLE: 19 Mar (1 ad) SHL (FJA). Northern Goshawk: 8 May (1) Butler, JHC (GDE and HHF). Red-shouldered Hawk: 19 Apr (1) Eliz (GOW); 8 May (2) Butler, JHC (GDE, HHF).

Turkey–Raven: Wild Turkey: 8 May (1) RIL (FJA); 20 May (1) Buffalo Mt., Washington Co. (MD, BIC, GWS). Greater Yellowlegs: 5 Apr (3) Eliz (FJA). American Woodcock: 24 Apr (1 at 1,675 meters elev.) Carver's Gap, CRC (FJA). Bonaparte's Gull: 22 Apr (1) WibL (MD). Black-billed Cuckoo: 8 May (1/1) Butler, JHC/MC (GDE, HHF/FJA). Yellow-billed Cuckoo: 29 Apr (1) Eliz (GDE), ers. Common Barn-Owl: through EOP (nest with 2 yg) Eliz (fide GDE). Great Horned Owl: through EOP (nest with 2 yg) near MC (FJA). Barred Owl: 8 May (3) Ripshin Mt., CRC (FJA). Chuck-will's-widow: 26 Apr (1) MC (FJA), ers. Whip-poor-will: 4 Apr (1) Eliz (GOW). Chimney Swift: 4 Apr (1) Eliz (HHF), ers. Ruby-throated Hummingbird: 17 Apr (1) Eliz (HHF), ers. Red-headed Woodpecker: 6 Mar (1) Eliz (JWB), only report in area. YELLOW-BELLIED FLYCATCHER: 21 May (1 seen and heard calling at 1,550 meters elev.) GSMNP, Sevier Co. (JCR). Least Flycatcher: 7 May (5) RM (LHTOS), ers. Alder Flycatcher: 14 May (1) RM (Brenda Hull), ers. Horned Lark: 9 Apr (1) Eliz (FJA), only report in area. Purple Martin: 8 Mar (2) Eliz (fide GDE), ers. TREE SWALLOW: 8 May–EOP (nesting pair with 5 yg) Butler, JHC (GDE, HHF, RLK). Common Raven: 1–4 birds on RM, Holston Mt. and Big Bald Mt. in Unicoi Co. throughout period.

Nuthatch–Grosbeak: Red-breasted Nuthatch: 18 Mar (1) Ripshin Mt., CRC (FJA); 3–6 on RM through EOP. Brown Creeper: 8 May (1) Ripshin Mt., CRC (FJA), lrs. House Wren: 14 Apr (1) Eliz (GDE), ers. Winter Wren: 25 Apr–2 May (1 pair) Buffalo Mt., Washington Co. (BIC). Blue-gray Gnatcatcher: 4 Apr (1) Eliz (GOW), ers. Veery: 7 May (1) Eliz (GOW, RLK), ers. Gray-cheeked Thrush: 7 May (1) WatL (GOW, RLK), ers. Warbling Vireo: 30 Apr (1) Eliz (GOW), ers. Blue-winged Warbler: 26 May (1 singing male) WatL (RLK), lrs. Pine Warbler: 11 Mar–EOP (1–2) WibL (LHTOS). Cerulean Warbler: 21 Apr (1) WibL (BIC), ers. Swainson's Warbler: 27 May (1) Rock Creek Park, Unicoi Co. (GWS, MD, BIC). Wilson's Warbler: 8 May (2) RM (FJA). Summer Tanager: 19 Apr (1) Eliz (fide Lois Herndon), ers. Vesper Sparrow: 10 Apr (2) Eliz airport (FJA). White-

crowned Sparrow: 8 May (1) MC (FJA), lrs. Red Crossbill: 12 Mar (10) Cove Ridge, JHC, near WatL (JWB); 29 May (5) GSMNP (TJW, Ceryl Ploger). Pine Siskin: present in high numbers through 18 May (LHTOS). Evening Grosbeak: 8 May (20) Eliz (fide GDE), lrs.

Locations: CRC—Carter Co.; Eliz—Elizabethton area, Carter Co.; GSMNP—Great Smoky Mountains National Park; JHC—Johnson Co.; MC—Milligan College, Washington Co.; RIL—Ripshin Lake, Carter Co.; RM—Roan Mountain, Carter Co.; SHL—South Holston Lake area, Sullivan Co.; WatL—Watauga Lake; WatR—Watauga River, Carter Co.; WibL—Wilbur Lake, Carter Co.

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REVIEW OF BREEDING RECORDS OF RED CROSSBILL AND PINE SISKIN IN THE SOUTHERN APPALACHIAN MOUNTAINS AND ADJACENT REGIONS

Douglas B. McNair
303 Robinson Street, Rockingham, North Carolina 28379

The breeding status of two Cardueline finches, Red Crossbill (*Loxia curvirostra*) and Pine Siskin (*Carduelis pinus*), in the southern Appalachian Mountains and adjacent regions is puzzling. Cardueline finches are unusual passerines in that they do not establish territories until after the nest-site has been chosen (Newton 1972). Thus, nest-building by the female or defense of the small nesting territory is the minimal acceptable evidence to indicate probable breeding. Courtship feeding, for example, evidence of probable breeding for most passerines, is only evidence of possible breeding for Cardueline finches. Nevertheless, probable and confirmed breeding evidence has accumulated for both Red Crossbill and Pine Siskin in the geographical area discussed herein. The purpose of this paper is to review these breeding records and interpret and discuss several aspects of Red Crossbill and Pine Siskin breeding biology, particularly in relation to habitat. I also analyze how these breeding records are related to irruptive flights of both species.

REVIEW OF RED CROSSBILL BREEDING RECORDS IN THE SOUTHERN APPALACHIAN MOUNTAINS AND ADJACENT REGIONS SOUTH OF PENNSYLVANIA

Table 1 lists all confirmed and probable breeding records of Red Crossbills in the southern Appalachian Mountains and adjacent regions south of Pennsylvania. I required that a record must state that young birds had uncrossed bills for the record to be considered proven breeding. Presumably, these young were seen at or near their natal localities. I call young with uncrossed bills juveniles, and young with crossed bills immatures. Records of immatures without further details are considered to be only possible breeding records at best because the young are most likely to have been post-breeding birds that dispersed or migrated an unknown distance away from their natal localities (see McNair 1988a). A list of records of immatures is available upon request from the author. This list undoubtedly underrepresents the actual number of records because some observers have not published details from their field notes. A few of these records may have been of bonafide local breeding pairs, an assertion which is strengthened by other evidence of breeding cited in several of the original publications. However, I cannot use

TABLE 1. Proven and probable breeding records of the Red Crossbill in the Southern Appalachian Mountains and adjacent regions south of Pennsylvania.

State	Locality	Elevation (m)	Habitat	Breeding evidence	Date[1]	Irruptive flight[2]	Reference
			Southern Appalachian Mountains				
SC	Caesar's Head, Greenville Co.	976	White Pine	B[3]; NY[4]; 1 juv. coll.	14 Jul–30 Aug 88	1	Pitts 1988
NC	Highlands, Macon Co.	1,160	White Pine	B	27 July 63	1	Johnston 1963
NC	Highlands	1,160	White Pine	B	24 July 86	1	McNair 1988a
NC	Highlands	1,160	White Pine	Abandoned nest	24 Jul–8 Aug 86	1	McNair 1988a
NC	Highlands	1,160	White Pine	FL[5]; 4 juv.	9 Sept 86	1	McNair 1988a
NC	Shining Rock W.A., Haywood Co.	1,751	Fir-Spruce	B	13 June 70	3	Simpson 1974
TN	Gatlinburg	397	Shortleaf Pine	FL; 2 juv.	10 April 38	u	Stupka 1938b
TN	Gatlinburg	397		FL	11–19 April 38	u	Stupka 1938b, 1963
TN	Gatlinburg	397		FL; 2 juv.	5 May 45	u	Stupka 1963
TN	GSMNP[6]	445	Pine	FL; 2 juv.	26 April 52	2–3	Stupka 1963
TN	GSMNP, Cades Cove	565		FL; 1 juv.	29 March 39	u	Stupka 1963
TN–NC	GSMNP, Indian Gap	1,606	Fir–Spruce	FL; 1 juv.	19 April 38	u	Stupka 1938b, 1963
TN–NC	GSMNP, Newfound Gap	1,537	Fir–Spruce	FL; 3 juv.	14 June 65	1	Swindell 1974
NC	Linville Gorge W.A., Burke Co.	1,006	Table Mountain Pine	NY	19 August 86	1	Simpson 1987
NC	Boone, Watauga Co.	1,006	White Pine	B, NY; 3 juv. from previous nest	5 September–13 October 81	1	Haggerty 1982
VA	Whitetop Mtn.		Spruce	FL; 1 juv.	12 June 80	1	Scott 1982
VA	Mt. Rogers and Whitetop Mtn., Washington Co.		Fir–Spruce	B	1 June 32	u	Scott 1981
VA	Price Mtn.		Pitch & Table Mountain Pines	NY	February–March 84	1	J. Groth, in litt.

TABLE 1. Continued.

State	Locality	Elevation (m)	Habitat	Breeding evidence	Date[1]	Irruptive flight[2]	Reference
VA	Blacksburg, Montgomery Co.	634	Pine	FL	Late winter & Spring 83	1	Groth 1984; pers. comm.
VA	Shenandoah Mtn.,[7] Tamarack Ridge, Highland Co.			FL; 2 juv.	21 June 75	1	Peake 1978
VA	Shenandoah Mtn.			FL; 1 juv.	15 July 78	1	Scott 1981
VA	Shenandoah Mtn.			FL; 1 juv.	6 April 79	1	Scott 1981
VA	Shenandoah Mtn.			FL; 3 juv.	3 April 80	1	Scott 1981
VA	Shenandoah Mtn., Rockingham Co.	671	Table Mountain Pine	B, NE[8]; 4 juv.	8 May–11 June 80	1	Goetz 1981
			Adjacent Regions South of Pennsylvania				
MS	Noxubee NWR, Winston Co.	100	Loblolly & Shortleaf Pines	B, NY	25 February–8 April 76	2	Warren et al. 1977
AL	Gadsden, Etowah Co.	169		B	7–8 February 56	2	Imhof 1976
GA	Stone Mtn., Dekalb Co.	318	Pine	Abandoned nest	8 April–1 May 51	2	Burleigh 1958
NC	Southern Pines, Moore Co.	76	Pine	FL; 1 juv.	1 Sept 74	2–3	Carter 1976
NC	Southern Pines	76	Longleaf Pine	FL; 3 juv.	15 May 76	2	Teulings 1976
NC	Raleigh, Wake Co.	100	Loblolly Pine	FL; 1 juv. coll.	6 May 67	1	Payne 1987
NC	Raleigh	100		FL; 3 juv.	20 April 76	2	Teulings 1976
NC	Raleigh	100		FL; 1 juv.	24 May 76	2	Teulings 1976

[1] All dates are from the twentieth century.
[2] Method modified from Bock and Lepthien (1976). See explanation in text.
[3] B, letter code from European Ornithological Atlas Committee (EOAC) (see Ibis 121:549). B, Building Nest.
[4] NY, letter code from EOAC. NY, Nest with Young seen or heard.
[5] FL, letter code from EOAC. FL, Recently Fledged Young.
[6] GSMNP is acronym for the Great Smoky Mountains National Park.
[7] For description of locality, see Scott (1981).
[8] NE, letter code from EOAC. NE, Nest containing eggs.

this material in my analyses below because I must rely on substantiated data only.

In the southeastern United States, breeding records for Red Crossbills are from February through October (Table 1), though crossbills may breed year-round depending on the seed crop (Bailey et al. 1953, Newton 1972). All but eight of 24 confirmed and probable breeding records from all habitats in the southern Appalachian Mountains occur from late winter to late spring, with estimated dates of egg-laying concentrated in March and April (Table 1). The eight mid-summer and early fall records are from white pine (*Pinus strobus*), Table Mountain pine (*P. pungens*), or unknown pine habitats. In regions adjacent to the southern Appalachian Mountains, all 8 breeding records of Red Crossbill occur in pine forests other than white pine from February to May (Table 1), except for one confirmed late summer record at Southern Pines, North Carolina (Carter 1976). Overall, though habitat data are incomplete, Red Crossbills not breeding in Fraser fir (*Abies fraseri*) and red spruce (*Picea rubens*) or white pine habitats only nested in other pine habitats at lower elevations, as high as 1,006 m in Table Mountain pines. A few breeding records have qualitative details on cone-crop production, in all cases called 'excellent' by the observer(s). However, anecdotal cone-crop production data are inadequate and not useful for correlating with the breeding records.

Red Crossbills often breed in small "colonies" (Newton 1972) and crossbills have almost certainly nested in "colonies" at Shenandoah Mountain (G. A. Hall, pers. comm.) and Highlands (McNair 1988a) in the southern Appalachian Mountains. Red Crossbills may also be double-brooded (Newton 1972). Only one record from the southeastern United States indicates that double-broodedness has occurred (Haggerty 1982). All well-described male Red Crossbills that have nested within their normal range or at extralimital localities within the southeastern United States have been adult birds, unlike extralimital probable first-year males breeding on Long Island, New York (Raynor 1983). However, few breeding records from the southeastern United States describe male plumages adequately (see Phillips 1977 for discussion of age and sex determination of Red Crossbills).

REVIEW OF PINE SISKIN BREEDING RECORDS IN THE SOUTHERN APPALACHIAN MOUNTAINS

Table 2 presents a summary of the eleven probable or confirmed and one uncertain breeding records of the Pine Siskin in the southern Appalachian Mountains south of Pennsylvania. Breeding evidence for all probable records, except for mine at Mt. Mitchell, one record at Roan Mountain, one record at Mountain Lake, Virginia, and at Morgantown, West Virginia, consists of juveniles seen without adults or being fed by them. Unlike Red Crossbills, juvenile siskins cannot be readily distinguished from immatures in the field. Consequently, I use the term juvenile to include immature siskins as well. Juvenile siskins may have dispersed an unknown distance away from their natal localities. Thus, locality, elevation, and habitat data given in Table 2 may be misleading and some of these records may more accurately represent possible, not probable or confirmed breeding. Nevertheless, the preponderance of the evidence suggests Pine Siskins occasionally breed in prime habitat of fir-spruce forest at high elevations of the southern Appalachian Mountains, or less frequently, in rural or suburban yards at lower elevations containing a mixture of coniferous and deciduous trees that provide natural foods in addition to seeds available at feeders. R. Lewis (pers. comm.) saw a female gathering nest material at Roan Mountain but did not locate the nest. A female apparently completed building a nest at Mountain Lake, Virginia, but then the pair abandoned the nest (Kain 1987). The adult female with brood patch netted at Morgantown, West Virginia, was a bird in breeding condition,

TABLE 2. Eleven proven or probable and one uncertain breeding records of the Pine Siskin in the Southern Appalachian Mountains south of Pennsylvania.

State	Locality	Elevation (m)	Habitat	Breeding evidence	Date[1]	Irruptive flight[2]	Reference
NC	Transylvania Co.	915	White Pine and Hemlock in Rural Yard	FL[3]	6 June–late June 86	2	Siebenheller and Siebenheller 1987
TN	GSMNP[4], Near Cosby	824		Juv. female coll.	2 July 37	u	Wetmore 1939
TN–NC	GSMNP	1,606	Fir–Spruce	Two juv. seen	13 June 38	u	Stupka 1938a
TN–NC	GSMNP, Indian Gap	1,606	Fir–Spruce	FL	12 June 82	3	Hall 1982a, Eller 1982
NC	Asheville	680		One pre-flight fledgling	2 June 82	3	Williams 1987
NC	Black Mtn.		Fir–Spruce	FL	21 June 73	2–3	Hall 1973
TN–NC	Roan Mtn.		Fir–Spruce	FL	4 July 73	2–3	Hall 1973
TN–NC	Roan Mtn.			B[5]	15–16 July 75	1	R. Lewis pers. comm. G. Eller pers. comm.
NC	Mt. Mitchell	2,016	Fir	Abandoned nest	Early June 86	2	McNair 1988b
VA	Mountain Lake			B	11–17 June 86	2	Kain 1987
WV	Near Cranberry Glades, Pocahontas Co.		Spruce	Nest found?			Hall 1983
WV	Morgantown, Monongalia Co.	272	Suburban Yard	I[6]—adult female netted	Late May 82	3	Hall 1982b

[1] See footnote 1 in table one.
[2] See footnote 2 in table one.
[3] See footnote 5 in table one.
[4] See footnote 6 in table one.
[5] See footnote 3 in table one.
[6] I, letter code from EOAC. I, Brood Patch on adult examined in the hand; bird probably Incubating.

and was banded earlier in February at the same locality in a suburban yard and garden with planted conifers (G. A. Hall, in litt.), though she may have possibly nested at another locality (see Yunick 1981 for comment on birds in breeding condition).

These breeding records of Pine Siskins in the southern Appalachian Mountains have an estimated range of egg-laying dates from early May through early to mid-June, given incubation and nestling periods of 13 and 15 days, respectively (Palmer 1968), though Lewis' record at Roan Mountain occurred much later. Though egg-laying in the northeastern United States is most frequent from mid-March through mid-May, clutches laid in May and June, occasionally as late as early July, have been recorded for a number of widely spaced localities, particularly in the Pacific Coast region south to California (Palmer 1968).

Numerous reports of Pine Siskins at moderate and high elevations in the southern Appalachian Mountains exist until late May through early to mid-June, but other than records tabulated in Table 2, only possible breeding evidence has been cited; most of these birds depart by mid-June (Stupka 1963, Palmer 1968; *Audubon Field Notes, American Birds,* and state ornithological journals). At Cashiers (1,065 m) and Highlands (1,160 m), North Carolina, for example, I saw about 40 Pine Siskins in at least six sites in white pine and Canadian hemlock (*Tsuga canadensis*) forest through June 1986 and 1987, when many of the siskins left. Until that time, several pairs or threesomes had shown evidence suggestive of breeding, i.e., singing, chasing, and courtship feeding. At the Highlands Country Club in white pine forest, a small group (8–12) of siskins continued to show some evidence of breeding through August. However, no territories around nest-sites were ever established and the siskins that remained in the Cashiers and Highlands area during the summer were not known to breed.

Pine Siskins may occasionally be found in fir-spruce forest from mid-June through the summer but reports and number of birds are then few in fir-spruce forest and other habitats. On rare occasions, siskins may be quite numerous though local (Stupka 1963, Pratt 1970, Simpson 1976, Herndon 1977, Hall 1983 and others). Unfortunately, almost all reports do not cite details on siskin behavior or give cone-crop production data.

IRRUPTIVE FLIGHTS OF BOTH CARDUELINE FINCHES AND THEIR RELATIONSHIP TO BREEDING RECORDS

I have relied upon regional reports, primarily from the Appalachian and Southern Atlantic Coast regions of *Audubon Field Notes* and *American Birds,* and from state ornithological journals, to form a gross qualitative measure on the magnitude of irruptive flights for both Cardueline finches, i.e., 1 = non-existent or poor flight, 2 = intermediate flight, and 3 = major flight (Tables 1–2) (after Bock and Lepthien 1976). Pertinent literature is adequate for me to assess if an irruptive flight has occurred since the 1950s (Tables 1–2). A U indicates data are incomplete or impossible to reliably assess before then.

Red Crossbill breeding records in the southern Appalachian Mountains have not usually occurred following intermediate or major irruptive flights (Table 1). In contrast, Red Crossbill breeding records in adjacent regions, except once, always followed an intermediate or major flight of the preceding fall and winter (Table 1). Despite the general improvement in intensity of field coverage in the southeastern United States since 1976, no breeding records of Red Crossbills in regions adjacent to the southern Appalachian Mountains have occurred since then, following the intermediate irruptive flight of 1975–76. No intermediate or major irruptive flights have occurred in the southeastern United States since 1976 (pers.

exam.). In contrast, many breeding records of Red Crossbill in the southern Appalachian Mountains exist since 1976 (Table 1).

All breeding records of Pine Siskin, except for one, have occurred following an intermediate or major irruptive flight of the preceding fall and winter (Table 2). A similar event has also occurred in southeast Nebraska, an extralimital breeding locality (Perry 1965).

Interestingly, evidence for synchronous winter movements of Red Crossbills in the southern Appalachian Mountains, and elsewhere, is weak (Bock and Lepthien 1976, Widrlechner and Dragula 1984, *Audubon Field Notes* and *American Birds*). A combination of rarity and flocking behavior, however, may prevent Christmas Bird Count (CBC) data from being able to reflect true abundance of Red Crossbills in any particular year. Ornithologists have emphasized that movements of Red Crossbills are erratic and local, so the characterization of these movements as weak or lacking may not be all that surprising. In contrast, Pine Siskin winter irruptions, as far as south-central and southeastern United States, are among the most synchronous of all boreal seed-eating birds (Bock and Lepthien 1976 and others).

These results indicate that Pine Siskins breeding in the southern Appalachian Mountains and Red Crossbills breeding in adjacent regions are erratic extralimital events, while Red Crossbills breeding in the southern Appalachian Mountains occur regularly though perhaps erratically within their normal range.

As an aside, breeding records for both species are concentrated into two periods, the late 1930's into the mid 1940's and the late 1960's to the present. The relative scarcity of breeding records from the late 1940's into the mid 1960's is difficult to assess. Old-school naturalists were responsible for the majority of the early breeding records, e.g., Stupka (1963), while the intensity of field coverage by modern observers in the southeastern United States has improved since the mid 1960's, e.g., on Shenandoah Mountain (Scott 1981).

CONE-CROP PRODUCTION DATA

Cone-crop production of Fraser fir is more frequent than red spruce, though of uncertain periodicity; good cone-crop production of red spruce usually occurs at intervals of 3–6 years in the southern Appalachian Mountains (Korstian 1937). Fir and spruce cones usually begin to develop as early as May, rapidly mature by mid-July through early October, and have shed their seeds by November (Korstian 1937). Korstian's observations are very general, however, and systematic information on cone-crop production for natural stands of fir-spruce and white pine in the southern Appalachian Mountains does not exist (S. G. Boyce, pers. comm.; Balmer and Williston 1983). Therefore, interrelationships of food supply, population size, and breeding records of Red Crossbills and Pine Siskins in the southern Appalachian Mountains and adjacent regions cannot be correlated with events occurring further north when irruptive movements of boreal seed-eating birds are triggered by wide-spread seed-crop reductions coupled with high population levels of the species involved (Bock and Lepthien 1976 and others).

CONCLUDING COMMENTS

Both Red Crossbills and Pine Siskins share many characteristics of breeding biology, i.e., they forage mainly on seeds, feed their young by regurgitation either on seeds alone or on a mixture of seeds and insects, nest alone or in loose "colonies" within which each pair defends a small territory around its nest, and forage away from the nest or nest 'colonies' in flocks (Newton 1972). Therefore, detection of breeding evidence for these two similarly conspicuous and audible species should

be roughly the same. Red Crossbills do have a longer breeding season than Pine Siskins in the southern Appalachian Mountains which may in part account for more numerous breeding records for the former species. However, Pine Siskin breeding records during springtime are far fewer than for Red Crossbills. In addition, Pine Siskins, like Red Crossbills, are adapted to breed under cold conditions (Perry 1965, Palmer 1968), but no suggestive breeding evidence exists from winter through mid-spring for siskins in the southern Appalachian Mountains. Furthermore, Pine Siskins are not known to breed in the southern Appalachian Mountains from mid-summer through October at all, when seeds from fir-spruce and white pine cones are available. Pine Siskins may breed in pine forests further north (Roberts 1936, Todd 1940, Palmer 1968, Johnsgard 1979 and others) and pine seeds are a preferred food. In contrast as previously documented, Red Crossbills do breed regularly in the southern Appalachian Mountains, though without adequate cone-crop production data and foraging data for each of these two species, what triggers seasonality of breeding readiness for Red Crossbills and Pine Siskins remains unknown.

Pine Siskins have occurred regularly in the southern Appalachian Mountains for at least the past 50–100 years (Stupka 1963, Bock and Lepthien 1976 and many others) and based on data reviewed herein, are apparently composed of migrant and winter visitor populations (see Yunick 1981). More intense field work may show that Pine Siskins breed less erratically in the southern Appalachian Mountains than presently known. Breeding pairs or populations of Pine Siskin in the southern Appalachian Mountains may be more poorly understood than the Red Crossbill.

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FIRST RECORD OF ROSS' GOOSE IN TENNESSEE

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At approximately 0800 on 20 November 1986, I discovered a white goose feeding with approximately 600 Canada Geese (*Branta canadensis*) in a winter wheat field along the Cumberland River within the Cross Creeks National Wildlife Refuge, Stewart County, Tennessee. While observing the white goose from a distance of about 120 m with a pair of 9 × 35 binoculars, I was immediately struck by the bird's noticeably smaller size in comparison to an adjacent adult blue phase Snow Goose (*Chen caerulescens*). I briefly left the site to obtain my Bushnell Spacemaster II spotting scope (20× lens) and window mount. Using these instruments, I was able to confirm my suspicions that the small white goose was a Ross' Goose (*C. rossii*). To my knowledge, the Ross' Goose has not previously been recorded in the state of Tennessee.

The bird was observed at 120 m from 0810 to 0824, at which times I noted that the bird had a small, stubby, pink bill which lacked the dark ridge or grinning patch of the Snow Goose; darkish mottling was present at the lower and upper bases of the mandibles. The body feathering was immaculately white (except for black primaries), indicating that this was an adult bird. Overall, the bird was approximately one-fourth smaller than the Snow Goose with which it was associating. The head was evenly rounded, and the neck and bill were notably shorter than the corresponding features on the Snow Goose. This was evident when, while on the water later in the day (1255–1313), both birds assumed an alert posture (necks fully vertically extended) while swimming adjacent to one another; at this time, the Ross' Goose was found to be at least a head length shorter in height than the Snow Goose. The bird was between one-fourth to one-third smaller than the Canada Geese which surrounded it at the time of discovery. Additionally, the bird was only imperceptibly longer than an American Black Duck (*Anas rubripes*) that was swimming adjacent to it in the afternoon. In flight, the smaller size of this goose next to the Snow Goose and Canada Geese was immediately evident. The leg color was not noted due to the height of the winter wheat. The eye color appeared dark at a distance.

The behavior of this bird was noteworthy in that it remained with the blue phase Snow Goose at all times: whenever the Snow Goose walked, swam or flew anywhere, the Ross' Goose was never far behind. This marked the second time I have noted this interaction between Ross' and Snow geese. Whether or not this behavior represents a pair bond (hybridization activities and intermediate forms of geese have been documented in the wild (Trauger et al., *Auk* 88:856–875, 1971)) I was unable to determine.

A thorough survey of the Cross Creeks Refuge on 22 November 1986 failed to locate the Ross' Goose (the bird was last seen on the afternoon of 20 November). However, additional occurrences of the Ross' Goose in Tennessee are not unlikely. On 1 February 1986, I found two adult birds in Massac County, Illinois (Kleen, *Illinois Birds and Birding* 2:74, 1986), in a flock of 6,000 Snow Geese which returned each evening to roost at the Ballard County Conservation Area, Kentucky; the Ballard County roost is approximately 81 km north of the Tennessee state line. On 30 November 1986, Brainard Palmer-Ball, Jr. (Palmer-Ball, personal communication) found an adult Ross' Goose at the Ballard County Conservation Area. On 7 December 1986, I visited the Ballard County site with Palmer-Ball

and, after examining a flock of 5,000–7,000 Snow Geese, we were able to locate three adult and one immature Ross' Geese. The presence of this species at this not-too-distant site, combined with the annual January–early March influx of Snow Geese into west Tennessee, makes future occurrences of Ross' Geese in Tennessee likely. Observers should carefully scan all Snow Goose flocks which are encountered. My experience (Frederick and Johnson, *Condor* 85:257–258, 1983; and Robinson, *Iowa Bird Life* 52(1):3–5, 1982) has been that a Ross' Goose can safely be identified in good light at about 185 m or less with modern 20× optical equipment.

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APRIL 1987 SNOWSTORM-RELATED BIRD MORTALITY IN UPPER EAST TENNESSEE

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In early April 1987, the Elizabethton and Johnson City areas, Carter and Washington Counties, Tennessee, experienced the heaviest snowfall ever recorded for the month of April. Sleet and snow began falling the evening of 2 April, and later that night it changed to a wet, heavy snow. The snowfall continued until mid-day on 5 April, at which time there were accumulations of 16 to 18 inches at the lower elevations, and over 2 feet in the higher mountains. Temperatures during this period ranged from 26 to 36 F. Clear skies and temperatures in the low 40's prevailed on 7 April, and most of the snow was melted from the lower elevations by 9 April.

At that time, other area Tennessee Ornithological Society members and I contacted Purple Martin (*Progne subis*) colony owners, and asked them to inspect their colonies for dead martins. Five colony owners reported a mortality rate of 17 percent. Similar mortality may have taken place with other swallow species, but I have no way of quantifying this. We also received numerous reports of Eastern Bluebirds (*Sialia sialis*) found dead on their nests or on the ground near nest boxes. Based on these reports, we estimated a bluebird mortality rate of 35–40 percent. On 26 April, the local TOS chapter conducted its annual spring bird count, and only 30 bluebirds were reported. This is many fewer than the average for the previous 10 years of 48 birds, and below the totals of 35 for both 1978 and 1979, when the population was recovering from heavy winter mortality (Pitts, *Migrant* 52:29–37, 1981).

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FLEDGING OF A RUBY-THROATED HUMMINGBIRD

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At approximately 1100 on 13 August 1987, I observed a young Ruby-throated Hummingbird (*Archilochus colubris*) leave its nest. The nest was on the lowermost, downsloping limb of a small (15–20 cm dbh) river birch (*Betula nigra*), about 4 m above a small rapids in Spivey Creek, Unicoi County, Tennessee. I had discovered the nest a week earlier when, as I sat on the deck of my home, a movement among the foliage attracted my attention. I had a clear view of the nest, which was about 30 m down a steep slope, on the opposite bank of the stream. I had a fleeting glimpse of the female perched on the rim of the nest, but I was not sure the nest was occupied until she returned about 30 minutes later and fed a single nestling.

Throughout the following week I observed the nest for several minutes at a time on numerous occasions; however, I saw the female feed its young only once more. Except while it was being fed, I was in doubt that the nestling was still there because it sat so low and remained motionless. Only by 11 August did I note the movement of the chick. On 12 August, there was more activity: the chick sat higher, occasionally stretched its wing, preened, and scratched its head.

Finally, on the morning of the 13th, the chick's activity increased and it appeared to be perching on the rim of the nest. I watched the nest more frequently, and was fortunate to have my binoculars trained on it just as a hornet or bumblebee approached and almost landed. The chick immediately flew horizontally 2 or 3 m, momentarily perched on a twig, then continued flying in the same direction 1 or 2 m. Then it abruptly reversed direction and angled upward for 3 or 4 m and disappeared into the foliage. Its flight seemed slow and laborious, compared to that of an adult, reminding me of a male American Woodcock (*Scolopax minor*) circling to gain altitude during courtship flight. During the next week, I did not see any activity on or in the immediate vicinity of the nest, although hummingbirds frequently visited the feeder and flowers on our deck, as well as the jewelweed (*Impatiens* sp.) along the stream.

Accepted 22 August 1987.

ANNOUNCEMENT

The 1989 Fall Meeting of the Tennessee Ornithological Society will be held at the Ramada Inn in Crossville on 13–15 October. Program Chairman is Dr. David Snyder (Biology Department, Austin Peay State University, Clarksville, TN 37044; 615/648-7781). Local arrangements are being handled by Dr. George R. Mayfield (999 Sunnyside Drive, Columbia, TN 38401). A block of rooms is being held for TOS members until Labor Day; please make lodging reservations with Ramada Inn (615/484-7581) prior to 1 September, if possible. When making reservations, indicate you are with TOS.

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AUDUBON'S YELLOW-RUMPED WARBLER IN TENNESSEE

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On 15 March 1987, while conducting an Eastern Phoebe (*Sayornis phoebe*) survey in the Land-Between-the-Lakes recreation area in Stewart County, Tennessee, I encountered a warbler with a yellow throat. Upon examining the bird closer to determine if it was a Yellow-throated Warbler (*Dendroica dominica*), I discovered that it was a Yellow-rumped (Audubon's) Warbler (*Dendroica coronata auduboni*).

From a distance of approximately 23 m, I observed the warbler along a stream at the edge of a wooded forest overlooking the right-of-way of Fort Henry Road. The bird was similar in shape and size to a Yellow-rumped (Myrtle) Warbler (*D. c. coronata*) seen at a similar distance. The tail appeared dark with white tail spots visible in flight. The yellow rump was also seen in flight and could be observed when the bird was perched facing away from me. The back and forehead were dark and the crown was offset from the forehead by a yellowish wash. I also noted yellow on the throat and as two distinct patches on the sides of the breast; the yellow contrasted with a splotchy pattern of black beginning to come into the breast and flanks, leading me to believe the bird was a molting male. A slight eye ring was noted. The underparts consisted of a light, pale color, and the wing bars typical of the genus, *Dendroica,* were present.

The bird was active and periodically caught insects on the wing or gleaned them from the limbs of some of the smaller branches of the tree in which it was found. On three or four occasions it emitted a "chip" note almost identical to the call note of a Yellow-rumped (Myrtle) Warbler. The observation described above lasted for a period of three minutes (1100–1103 hours, time approximate) before the bird flew to a deeper section of the forest.

Tyler and Lyle (*Migrant* 23:51, 1952) reported an Audubon's Warbler (*D. auduboni*) from Johnson City; at that time, Audubon's Warbler was considered to be a species distinct from the Myrtle Warbler (*D. coronata*). Later, *D. auduboni* was merged with *D. coronata* (because of known interbreeding), with the two forms to be known as the Yellow-rumped Warbler (*Migrant* 44:29–33, 1973). Alsop (*Migrant* 43:57–64, 1972) did not include the Audubon's Warbler on his list of Tennessee birds because he felt the documentation given by Tyler and Lyle was inadequate. Consequently, the bird I have described here apparently represents the first documented record of *D. c. auduboni* in Tennessee.

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HERON AND EGRET ROOST DISCOVERED NEAR MEMPHIS

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During the summers of 1986 and 1987, herons and egrets were observed in and around the southwest Shelby County, Tennessee, area in sufficient numbers to suggest the existence of a nesting colony. After observing regular flights of herons in the Mud Lake area of Shelby County in July 1988, Jeff R. Wilson rented a small single-engine airplane and surveyed the area from the air on 5 August 1988. During the aerial survey, he observed a roost of herons and egrets in the southwest corner of Shelby County, just within the Memphis corporate boundary. Although it was not possible to obtain an accurate count of each species at the roost, he estimated that over 3,000 birds, including several White Ibis (*Eudocimus albus*), were present.

Jeff Wilson, Carolyn Bullock, Dollyann Daily and I approached the roost from the ground on 6 August 1988. It was necessary to access the area from the Arkansas side of the Mississippi River. We stationed ourselves on a dike approximately 450 m west of the roost and, during the last 2.5 hours of daylight, counted the birds as they approached the roost from daytime feeding areas. The birds arrived at the roost site from many directions, but it was possible to identify three major flight corridors and assign on observer to each; due to the large numbers of birds approaching the roost site, the fourth observer recorded the data that the other observers collected.

We counted over 6,100 birds, representing 10 different species (Table 1). The species observed included: Great Blue Heron (*Ardea herodias*), Great Egret (*Casmerodius albus*), Snowy Egret (*Egretta thula*), Little Blue Heron (*Egretta caerulea*), Tricolored Heron (*Egretta tricolor*), Cattle Egret (*Bubulcus ibis*), Green-backed Heron (*Butorides striatus*), Black-crowned Night-Heron (*Nycticorax nycticorax*), Yellow-crowned Night-Heron (*N. violaceus*) and White Ibis. Three subsequent, but incomplete, surveys of the roost were also made by Jeff Wilson and other birders later in August (Table 1). Wood Storks (*Mycteria americana*) were added to the species list on 27 August 1988.

The roost is located in a stand of black willow (*Salix nigra*) trees on a sandbar at the southwest corner of Ensley Bar in the channel of the Mississippi River at River Miles 719 and 720. Because of drought conditions throughout the year, the river was at a very low level and thus exposed the portion of Ensley Bar occupied by the roost. Although most of the Ensley Bar actually lies in Crittenden County, Arkansas, the roost itself is in Shelby County. Many of the birds arriving at the roost apparently came from feeding areas in Arkansas; others approached the roost from the Tennessee side of the river, including areas south and west of Mud Lake.

This roost is significant not only for the large numbers of birds that were found, but also because of the rare species which were present. The 1,219 Great Egrets (1,500 on 13 September 1988, fide Martha G. Waldron) and the 1,884 Cattle Egrets present on 6 August, as well as the 156 Snowy Egrets counted on 11 August, represent the highest one-day counts for these species in Tennessee. The count of 2,882 Little Blue Herons is eclipsed only by the 3,000 birds that were estimated to be at Dyersburg on 30 June 1962 (*Migrant* 33:47, 1962).

The White Ibis is a rare but regular post-breeding wanderer, and its occurrence at this roost site was not unexpected. However, prior to August 1988, there were

Table 1. Results of evening counts at the Memphis roost.

Species	Number of birds			
	6 August	11 August*	14 August*	27 August*
Great Blue Heron	50			
Great Egret	1,219			
Snowy Egret	85	156		
Little Blue Heron	2,882			
Tricolored Heron	12	26	25	6
Cattle Egret	1,884			
Green-backed Heron	3	11		5
Black-crowned Night-Heron	2	12	5	6
Yellow-crowned Night-Heron	2	6	3	3
Night-Heron, species	8		7	9
White Ibis	9	11	15	3
Wood Stork				70
Total:	6,156	222	55	102

* Data for selected species only were collected.

only about 13 records of Tricolored Herons in the state, all of which were of single birds. The totals for this species (Table 1) are thus quite surprising and causes one to wonder if Tricoloreds are not annual visitors to extreme southwest Tennessee. The 70 Wood Storks represented the largest one-day count of this species in Tennessee in 23 years.

Ensley Bar was possibly the site of a Cattle Egret nesting colony in 1987. U.S. Army Corps of Engineers personnel stated that about 1,000 Cattle Egrets were present during that year, but no nesting was observed in 1988; several eggs were reportedly collected between 1985 and 1987 (fide Martha G. Waldron). Additional surveys of Ensley Bar should be conducted because of: (1) the large numbers of herons and egrets observed at this site in 1988; (2) the rare species which were found; and (3) the possibility that the site is used for nesting by one or more species of herons. Although the level of the Mississippi River may affect the extent to which the site can be used for roosting or nesting in a given year, it is imperative that additional field data be collected in the event that a management proposal for the area is required.

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BOOK REVIEWS

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A Field Guide to Hawks: North America—by William S. Clark with illustrations by Brian K. Wheeler, 1987. Houghton Mifflin Company, Boston, vi + 198 pp., 32 range maps, 24 color plates, 2 black-and-white plates, 241 black-and-white photographs, hardcover/paper, $19.95/13.95.

Hawks in Flight—by Pete Dunne, David Sibley, and Clay Sutton, 1988. Houghton Mifflin Company, Boston, xviii + 254 pp., 95 line drawings, 143 black-and-white photographs, hardcover, $17.95.

Handbook of North American Birds, Vols. 4 and 5: Diurnal Raptors—edited by Ralph S. Palmer, 1988. Yale University Press, New Haven and London, vii + 433/465 pp., 16/18 range maps, 43/28 line drawings, hardcover, $48.00+/set.

Whether you are a fledgling hawk watcher, an advanced hawk migration observer, or a raptor biologist, one of the foregoing texts is a necessary addition to your library. Most of us will want to obtain copies of all three of these important contributions to the study of birds of prey.

Clark's *Hawks* is the 35th volume in the Peterson Field Guide series. It offers excellent color plates of most North American diurnal raptors, usually in a satisfying variety of plumages. The text is competently written, though less well-done than the plates, with species accounts containing sections on Description, Flight, Behavior, Status and Distribution, Fine Points (of identification), Unusual Plumages, Subspecies, Etymology (wholly unnecessary), and Measurements. Some glaring errors detract in a minor way from the achievement of this work, especially the transposition of the harrier and vulture silhouettes in the endpapers, as well as the reversal of the Turkey and Black Vulture accounts in the main text. The range maps are adequate from a continental perspective, though hardly so from the viewpoint of a Tennessee observer; the maps for Osprey, Northern Goshawk, Rough-legged Hawk, and Bald Eagle are especially misrepresentative of those species' ranges here. The photographs are generally fairly good, though a few (e.g., 25a) are quite worthless. All in all, neophyte hawk watchers can hardly do better than to start their field work with this text, which goes significantly beyond the general field guide in condensing identification tips and information about raptors.

Hawks in Flight is oriented toward hawk migration enthusiasts and is a fine contribution to the literature about this much-studied aspect of raptor biology. Dunne takes a "gestalt" (i.e., holistic) approach to identifying raptors in flight and writes with his usual flair (e.g., he calls *Accipiters* "artful dodgers" and the harrier "the great fooler"). The species accounts are variable in content but generally contain treatment of Migration, Identification, and Similar Species. Sibley's line drawings are my own favorite part of the text. These capture the profile and markings of nearly all the raptors with remarkable fidelity, although they are finally not quite so satisfying as the color plates found in *Hawks*. The photographs assembled by Sutton are better on average than those in *Hawks* in terms of depicting flight characteristics.

The 4th and 5th volumes of Palmer's *Handbook* series are devoted to diurnal raptors. Like their three predecessors, these volumes compress an awesome amount of material into a quite manageable number of pages. There are simply not enough accolades available to say just how excellent and important these volumes are. Nearly everything known about the biology of 42 species of raptors, as related to North America, is summarized by Palmer. Most of the species accounts contain an introduction and sections devoted to Description, Subspecies, Field Identifi-

cation, Voice, Habitat, Distribution, Migration, Banding Status, Reproduction, Survival, Habits, and Food. The style is telegraphic but quite readable; the contents exhaustive and fascinating. I was delighted to see works published in *The Migrant* by several Tennesseans, including Albert Ganier, Walter Spofford, and H. O. Todd, listed in the Literature Cited section, indicating that the complete set of our journal donated in 1983 to Dr. Palmer was put to good use. No professional biologist at all interested in birds of prey should be without a copy of these volumes; they are an incredible achievement.

Whatever your level of interest in hawks may be, one of these works will fit your needs, and probably all of them will find their way onto your bookshelf if you remain interested in raptorial birds for very long.—Stephen J. Stedman, Department of English, Box 5053, Tennessee Tech University, Cookeville, TN 38505.

Accepted 12 August 1988.

EDITORIAL

T. David Pitts

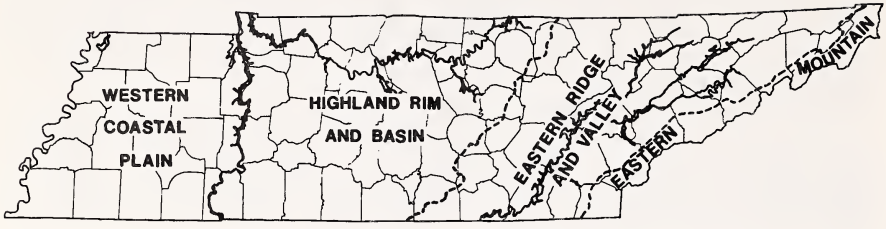
My general policy is to publish manuscripts in chronological order based on date of receipt and acceptance. Several factors make strict adherence to this policy difficult. To avoid having blank pages it is necessary that the total number of pages in each issue be a multiple of four; 28, 32, and 36 page issues are most common. It is easier to incorporate brief items than long articles. Consequently, some short notes may be published before a previously accepted, but longer, manuscript for which space is not available. Another reason a manuscript may be published out of chronological sequence is the presence of data or information that may influence management plans for rare and endangered species or critical habitats. This is the reason John Robinson's manuscript on wading birds is being published in this issue; John's manuscript on Bewick's Wrens, which was scheduled for publication in this issue, will be delayed.

The addition of a "Date of Issue" (see bottom of the Table of Contents) will help future readers understand how a manuscript accepted on 25 February 1989 could appear in the December 1988 issue. Your suggestions for improving *The Migrant* are always welcome.

The Migrant, 59(4):122–131, 1988

THE SEASON

John C. Robinson, Editor



SUMMER: 1 JUNE–31 JULY 1988

The weather—generally hot and dry—is specifically summarized in each of the 4 regional summaries in this report. Of significance, however, are the levels of the major rivers throughout the state. While the Mississippi River reached its lowest level in recorded history, the Cumberland (Barkley Lake) and Tennessee (Kentucky Lake) Rivers, which are usually lowered beginning in mid-July, were maintained at or above their summer pool elevations throughout August. Other lake and river levels in the state were also noted to be higher or lower than normal. The impact that these water levels had on shorebird and waterfowl migrations will be assessed in the fall report.

Breeding Bird Atlas work continued across the state this summer and resulted in the discovery of several species at new or unusual breeding season locations; in many cases, positive breeding evidence was obtained. Willow Flycatchers and Cedar Waxwings were well-represented in the Atlas data, with positive breeding evidence for the former species coming from areas as far east as Washington Co. and as far west as Henry Co.

Many observers across the state noted the presence of unusual water birds this summer. In west Tennessee, Black-bellied Whistling-Ducks were found for the second time in Shelby Co., and a Red-breasted Merganser lingered for over 2 weeks at Paris Landing State Park. In the Highland Rim and Basin Region, 6 species of waterfowl not usually found during the nesting season in middle Tennessee were observed in June in Stewart Co. The occurrence of an American Coot and other water birds in the Eastern Ridge and Valley is discussed by Richard L. Knight. A Lesser Scaup was present in early June in Carter Co. Many other notable and very important data were collected this summer and are reflected in each of the 4 regional summaries below.

Following the regional summaries and list of observers is a table showing the dates when field records are due. All observers are encouraged to mail their field records to the appropriate regional compiler by these dates to assure timely publication in this journal.—John C. Robinson

The following abbreviations are used: ad—adult; im—immature; yg—young; max.—maximum 1-day count in 1 county during period; ers—earliest reported sighting; in.—inch; EOP—end of period; NWR—National Wildlife Refuge; WMA—Wildlife Management Area; S.P.—State Park.

WESTERN COASTAL PLAIN REGION—Observers braved the hot and very dry weather to run their breeding bird routes and to work on their atlasing areas.

The Mississippi River was the lowest in its recorded history, which probably accounts for the widespread nesting of the Interior Least Tern. Mississippi Kites, shorebirds and Least Terns were well reported this season. The Mississippi Kite population was up from past years, perhaps as a result of a hacking program initiated by the Memphis Zoo. Since the beginning of the hacking program in 1983, 85 kites have been released in west Tennessee. All of the birds were taken from nests in Kansas by the Kansas Fish and Wildlife Agency.

Anhinga-Gallinule: Anhinga: 1 Jun–EOP (2 ad, 1 known nest) REL, LKC (Eagle Hacking personnel). Heron species: 22 Aug (200+ herons) Jct 79 and Great River Rd., LKC; this total includes 100 Great Egrets and moderate numbers of Snowy Egrets and ad and im Little Blue Herons; these birds could be from the Caruthersville, MO, heronry (WGC). Snowy Egret: 28 Jul (48) Island 21, DYC (WGC), max. TRICOLORED HERON: 31 Jul (1/1) ESL/Cockleburr Lake, SW SBC (JRW). BLACK-BELLIED WHISTLING-DUCK: 17–18 Jun (4) Ensley Bottoms, SW SBC (JRW); third state record. Red-breasted Merganser: 22 Jun/9 Jul (1 ad male) PLS (DJS, JCR); extremely rare in the summer. Mississippi Kite: 13 Jun (88) LHWR, Lauderdale Co. (CHB, MGW); 29 Jun (7/2) South Fork Obion River WEC/Middle Fork Obion River, WEC (Jerry Strom, Louis Bordenave); 29 Jun (1 nest, 2 yg) MEM (Knox Martin, MGW); summer count in DYC yielded 1–10 kites in each of 7 locations (WGC). Bald Eagle: 6 Jul (2 ad) REL, LKC (WGC); 1 ad and 1 im were observed the entire summer visiting the eagle hacking area in LKC (MGW). Cooper's Hawk: 15 Jun (1 ad) NW of Hillard, on county road 9921, Carroll Co. (CHB, DPB, MGW); 29 Jun (1) Middle Fork Obion River, WEC (Jerry Strom, Louis Bordenave). PEREGRINE FALCON: 13 Jun (1) LHWR, TIC (CHB, MGW). Purple Gallinule: 4 Jun (1) HWR (JRW, RPF).

Shorebirds: The Ensley Sewage Lagoons were checked about every 5 days during the summer season. The shorebird species have remained basically the same since 1982 with individual numbers varying very little. The following data reflect the lowest and highest numbers seen in the period. Lesser Golden-Plover: 18/20 Jun (1, non-breeding plumage) ESL (JRW, JCR/DJS, Todd B. Easterla), second June record for west Tennessee. Semipalmated Plover: 23 Jul–EOP (3–15) ESL (CHB, VBR, MGW). Lesser Yellowlegs: 7 Jul–EOP (1–27) ESL (CHB, VBR, MGW); 21 Jul (29) Heloise, DYC (WGC), max. Solitary Sandpiper: 7 Jul–EOP (2–31) ESL (CHB, VBR, MGW). Spotted Sandpiper: 4 Jun (1) 0.8 km E of TN 76 on Hatchie River, Haywood Co., and (1) W of TN 76 on Hatchie River, HWR (BBC, LCC, JBG, CHB); 18–28 Jul (1–4) Heloise, DYC (WGC); 21, 28 Jul (5) Island 21, DYC (WGC); 10–20 Jul (3–6) ESL (JRW); a pair nested for the first time in Shelby Co., fledging 1 yg (JRW, Marvin Davis, et al.). Sanderling: 9 Jul (3) Is 13 (JCR), ers. Semipalmated Sandpiper: 9 Jul (3) Is 13 (JCR), ers; 17 Jul–EOP (3–227) ESL (CHB, VBR, MGW); 4 Jun (1) HWR (JRW); 6 Jun (1) Is 13 (WGC). Western Sandpiper: 12 Jul–EOP (1–3) ESL (CHB, VBR, MGW). Least Sandpiper: 7 Jul–EOP (2–255) ESL (CHB, VBR, MGW); 18–28 Jul (25) Heloise, DYC (WGC). White-rumped Sandpiper: late spring reports: 5 Jun (14) ESL (JRW); 6 Jun (2) Is 13 (WGC). Pectoral Sandpiper: 7 Jul–EOP (1–540) ESL (CHB, VBR, MGW). Stilt Sandpiper: 17–26 Jul (1–6) ESL (CHB, VBR, JRW, MGW); 21 Jul (10) Heloise, DYC (WGC). American Woodcock: 18 Jun (1) Ensley Bottoms, SW SBC (JRW).

Terns: Least Tern: 1 Jun–EOP: with the lowest water level in the written history of the Mississippi river, most bars were attached and were sometimes 0.8 km wide and often 4.8 km long. This year the size of the nesting colonies was smaller, but the number of colonies per unit area was larger and spread over a wider area.

Many of the colonies were about 300 m from the water's edge and always on the highest point of the bar. The birds were found nesting in a variety of habitats: all sand with no vegetation; hardpan mud with surface scrapes; heavy gravel, with nests lined with pea-gravel; and the typical sand habitat—sparse vegetation with a stick near the nest. Three-wheel tracks were found on many of the sandbars connected to land, but most tracks were on the perimeter and not necessarily near the nesting sites. Numbers for 1988 are not yet available. However, surveys conducted during 2–4 day periods in 1985, 1986 and 1987 along the Mississippi River between River Miles 530 and 947 yielded as many as 2,967 terns at 61 sites, including 41 colonies (John Rumancik, Army Corps of Engineers). (Specific details should be published—Ed.) Black Tern: 9 Jul (1) Is 13 (JCR).

Goatsuckers: Very high numbers of Chuck-will's-widows (CWW) and Whip-poor-wills (WPW) were reported in May by BBC and LCC, as illustrated in the table below:

Table 1. Chuck-will's-widow and Whip-poor-will Survey in southern West Tennessee.

			CWW		WPW	
Date	County	Kilometers Surveyed	Total	No. per km	Total	No. per km
28 May	Hardeman	37.5	98	2.6	48	1.3
28/29 May	Haywood	9.6	15	1.6	10	1.0
30 May	McNairy	61.1	157	2.6	98	1.6
30 May	Chester	90.4	149	1.6	171	1.9

Flycatcher-Sparrow: Willow Flycatcher: 18 Jun (5) Ensley Bottoms, SBC (JRW); 26 Jun (1) SW of O'Neal Lake, HWR (JRW); 20 Jun (1) LHWR, TIC (CHB, MGW, Linda Waters); 23 Jul (ad feeding yg) BRF (JCR, Todd Fink, Doug Robinson). Scissor-tailed Flycatcher: 20 Jun (1) ESL (DJS, Todd B. Easterla). WESTERN KINGBIRD: 6 Jun (1) ESL (JRW); first June record in the state. Tree Swallow: 4 Jun (3, entering hole of dead tree) HWR (JRW). Cliff Swallow: 11 Jun (300 nests) on TN Hwy 20, DTC (BBC, LCC). Barn Swallow: 5 Jun (74 nests) I-55 overpass, Delaware St., MEM (BBC, LCC). House Wren: 8 Jun (nesting in hole under an house eave, 2 singing males near the home) Dyersburg (Joe R. Norman); 6 Jul (1) Is 13 (JCR). Sedge Wren: 23 Jul (3) BRF (JCR, Todd Fink, Doug Robinson), ers. Warbling Vireo: 11 Jun (2) Beech Bend, TVA Recreational Area, DTC (BBC, LCC); 10 Jun (1) Camden Landing, Benton Co.; other locations in Benton Co. that did not yield sightings were Granny's Branch Resort, Nathan Bedford State Forest, and the east end of US 70 at the Tennessee River (BBC, LCC). Cerulean Warbler: 4 Jun (1) HWR (BBC, LCC, JBG). Worm-eating Warbler: 11 Jun (1) Ponderosa Resort area, DTC (CHB). Swainson's Warbler: 5 Jun (1) near Middleburg, HDC (CHB); 27 Jun (1) Marshall Creek, Van Buren and Saulsbury Rds., HDC (BBC, LCC). Bachman's Sparrow: 1 Jun–EOP (14) Bruton Branch, HDC (DJS), and (5) Burnt Church community, HDC (DJS). Grasshopper Sparrow: 5 Jun (1) Middleburg, HDC (CHB); 26 Jun (12 ad, 3 yg) Ensley Bottoms, SBC (JRW); 23 Jul (1) BRF (JCR, Todd Fink, Doug Robinson).

Locations: BRF–Britton Ford, Henry Co.; DTC—Decatur Co.; DYC—Dyer Co.; ESL—Ensley Sewage Lagoons, Shelby Co.; HDC—Hardin Co.; HWR—Hatchie NWR, Haywood Co.; IS 13—Island 13, Lake Co.; LHWR—Lower Hatchie NWR,

Tipton and Lauderdale Cos.; LKC—Lake Co.; MEM—Memphis; PLS—Paris Landing S.P., Henry Co.; REL—Reelfoot Lake; SBC—Shelby Co.; TIC—Tipton Co.; WEC—Weakley Co.

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HIGHLAND RIM AND BASIN REGION—The weather pattern in June and July throughout most of the region was hot and dry. Temperatures frequently exceeded 90°F. Rainfall was scattered, varying noticeably between locations. At Cross Creeks NWR in Stewart Co., 4.42 in. of rain were recorded, but only about 6% (0.26 in.) of that total fell during June. At Nashville, where rainfall normally exceeds 7.50 in., only 3.71 in. were recorded.

Beginning with the fall 1988 report, the new Highland Rim and Basin Region compiler will be David F. Vogt (7818 Old Charlotte Pike, Nashville, TN 37209). All field observations should be mailed to David F. Vogt by the dates listed at the end of the "Observers" section of this report. Any notable records not included in the following summary should also be submitted for inclusion in an addendum in a later issue of The Migrant.

Grebe-Hawk: Pied-billed Grebe: 17 Jul (1 ad) BCWMA (DWB). Great Blue Heron: 30 Jul (60) SWC (DWB), max. Great Egret: 4, 24 Jun (1) CCNWR (JCR); 17 Jul (4) SWC (DWB); 30 Jul (8) CCNWR (DWB), max. Snowy Egret: 9 Jul (1) CCNWR (DWB); 19, 23 Jul (3, 4) CCNWR (JCR), max.; up to 2 birds lingered at this site through EOP (DWB). Little Blue Heron: 2, 16 Jun (3, 4) CCNWR (JCR); post-breeding dispersals arrived by mid-Jul; 31 Jul (121–49 ad, 68 im and 4 second-year birds) CCNWR (JCR), max. Green-backed Heron: 31 Jul (31) SWC (DWB), max. Black-crowned Night-Heron: 21 Jun (15) CCNWR (JCR); 17 Jul (52) CCNWR, Cumberland City Steam Plant, SWC (DWB, JCR), max. GREEN-WINGED TEAL: 2 Jun–EOP (1 male, capable of flight) CCNWR (JCR), second summer record for state. American Black Duck: 15 Jun (1) CCNWR (JCR), second consecutive year for summer record at this site. NORTHERN PINTAIL: 29 Jun (1, molting female) CCNWR (JCR). Blue-winged Teal: 1–10 Jun (1–2) CCNWR (JCR). AMERICAN WIGEON: 29 Jun (1 male) CCNWR (JCR). Hooded Merganser: 4–5 Jun (1–2) CCNWR (JCR). Osprey: 2 Jun (1) CCNWR (JCR), probably late spring migrant. MISSISSIPPI KITE: 24 Jun (1 ad) SWC (DWB), second county record. Bald Eagle: nesting continued at several of the sites discussed in last year's report, with 7 yg fledging from 4 nests in 1988; in SWC, 1, 2 and 2 yg successfully fledged from the Westvaco, LBL and Averitt nests; the nest in Jackson Co. near Cordell Hull Lake was also successful and produced 2 yg (fide Robert M. Hatcher). Red-shouldered Hawk: 16 Jun (nest with 2 yg) Shelby Bottoms, Davidson Co. (Mark S. Hackney, Don Morrow).

Yellowlegs-Finch: Lesser Yellowlegs: 24, 29 Jun (1) CCNWR (JCR), second consecutive year for late Jun record at this site. Spotted Sandpiper: 2, 25–26 Jun (1) CCNWR (JCR, DWB). Ring-billed Gull: 21 Jun (1) Percy Priest L. (Margaret L. Mann). Red-headed Woodpecker: 17–21 Jul (2–3) CCNWR (DWB, JCR). Eastern Wood-Pewee: 17 Jul (21) SWC (DWB), max. Willow Flycatcher: up to 4 active territories at CCNWR, with a nest and 2 eggs being found on 19 Jun in the Cumberland City Atlas block (JCR). Horned Lark: 22 May (1, juvenile plumage) Pool 2, CCNWR, and (2–3 ad) Barkley WMA, SWC (JCR), possible nesting; 19 Jun (2 ad) Pool 7, CCNWR (JCR); 4 Jul (1) Loretto, Lawrence Co. (DJS). Bank Swallow: 10 Jun (2) CCNWR (JCR); 10, 17 Jul (1) CCNWR (DWB). Cliff Swallow:

22 Jun (600) CCNWR (JCR). Barn Swallow: 17 Jul (108) SWC (DWB). Wood Thrush: 17 Jul (29) SWC (DWB). CEDAR WAXWING: there were many reports from throughout the region this summer, with multiple observations being made in the Nashville area and at LBL and CCNWR; a possible byproduct of the nomadic influx of birds during the late May–early July period is the establishment of breeding territories (see the Eastern Ridge and Valley Report for an account of active breeding sites in that Region); 24 Jun (2 ad) Model Fire Tower, LBL, with 2 im being fed by the ad mid-Jul through EOP (DWB); 2 Jun–EOP (2–3) CCNWR (JCR); 1 Jun (2) LBL, south entrance (DWB); 19 Jun (2) near Indian Mound, SWC (JCR); 27 Jun–9 Jul (2) Wiley's Spring Bay, SWC (DWB); 11 Jul (1) Standing Rock Creek, SWC (DWB); 17 July (2) BCWMA (DWB). Black-and-white Warbler: 14 Jun (1) Fort Donelson Shores, SWC (DWB); 16–17 Jul (1) Wiley's Spring Bay, SWC (DWB). Hooded Warbler: 19 Jun (6, including 1 ad feeding 2 yg in a nest) Long Creek, SWC, first nesting evidence for county (DWB). Summer Tanager: 10 Jun (2 ad feeding 1 recently fledged yg) LBL (DJS). Dickcissel: 22 Jun (1 recently fledged yg) CCNWR (DJS); 25, 30 June (3) South Harpeth Rd., Cheatham Co. (Ann T. Tarbell); 28 Jun (16) CCNWR (JCR), max. Song Sparrow: 6–22 May (2–3 singing males) Barkley WMA, new SWC territorial site; regular numbers reported from CCNWR (JCR, DWB). Bobolink: 10 Jun (1 ad male) CCNWR (JCR), late. Northern Oriole: 16 Jun (2) near Tim's Ford Lake, Franklin Co. (Ann T. Tarbell). House Finch: 2 Jun–EOP (2–3 ad) Dover, first SWC summer records.

Locations: BCWMA—Bear Creek Waterfowl Management Area, Stewart Co.; CCNWR—Cross Creeks NWR, Stewart Co.; LBL—Land-Between-the-Lakes, Stewart Co.; SWC—Stewart Co.

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EASTERN RIDGE AND VALLEY REGION—Drought and heat dominated the region this summer. June rainfall was only 20–25% of normal: 0.6 in. (2.7 in. deficient) at Chattanooga; about 1 in. at Knoxville, and 0.9 in. (2.6 in. deficient) at Johnson City. According to a TVA press release, this was the driest June in the Tennessee River valley since 1936, keeping the year on track to be the driest on record. July precipitation increased to near normal levels; 3.6 in. at Knoxville and 3.2 in. at Johnson City were about 1 in. below average, while a total of 5.8 in. at Chattanooga was 1.3 in. above average. However, much of this July rain came in the form of widely scattered thundershowers that missed some areas. Temperatures during both months were several degrees above normal and numerous record highs were set. Over half the days in both months had high temperatures exceeding 90°F, and a few 100°F highs were reached in July.

Because of the drought, most lakes were well below normal summer levels, except Boone and Chickamauga Lakes. Many ponds, springs and streams dried up completely. The impact of drought and heat on local birdlife was less obvious and little comment was received, except that shorebird habitat was scarce. Could the presence of some unusual water birds (loon, grebe, Least Bittern, Ring-billed Gull, Common Tern) in mid-summer have been drought-related? Perhaps Dickcissel and Lark Sparrow, also?

The second TOS Breeding Bird Foray of the year was held 24–26 June in Hancock and Hawkins Counties. Sixteen observers worked in 16 blocks, finding 106 species. The most common species (found in all 16 blocks) were: Mourning Dove, Chimney Swift, Eastern Kingbird, Barn Swallow, American Crow, Carolina Chickadee, Tufted Titmouse, Carolina Wren, Cedar Waxwing, Common Yellow-

throat, Northern Cardinal, Indigo Bunting, Chipping Sparrow, Field Sparrow, Song Sparrow, Brown-headed Cowbird and American Goldfinch. Another 11 species were found in 15 blocks.

Observations were reported from 30 (71%) of the 42 counties that are all or partly in the region, well above "normal" coverage and largely due to atlas work. Reports for Osprey (nesting in 4 areas), Sharp-shinned Hawk (10 reports) and Cooper's Hawk (7 reports) were encouraging. An "invasion" of nesting Cedar Waxwings was noteworthy. Other interesting reports follow.

Loon-Ibis: Common Loon: 19 Jun (1) CRL (RLK); 14 Jul (1) Clinton, ANC (Wesley K. James). Pied-billed Grebe: 21, 29 Jun (1) Bon Air, WHC (SJS), possibly breeding; 4 Jul (1/1) HRA/CHL (RJH), breeders, early migrants, or non-breeding summering birds? Least Bittern: 4, 9/9 Jul (3–4/1) CHL/HRA, MEC portion (RJH), "To my knowledge, these sightings are the first ever recorded during the nesting season on a main stream reservoir" (KHD). Great Blue Heron: no reports on the region's nesting colonies. Great Egret: 3 Jun (1) AUS (MD, GWS, BLC); 25 Jun (1) SAB (KHD, LHD); 26 Jun (1) CRL, HWC portion (CPN); 4–31 Jul (2–6) HRA (RJH, KHD, LHD); 14, 26 Jul (1) EBF (CPN); 17, 31 Jul (1) AUS (RLK); 25 Jul (10) Douglas Lake, Cocke Co. portion (JAK); 30 Jul (1) KSP (ARH). Little Blue Heron: 4, 9 Jul (1, 2) HRA (RJH); 21 Jul (2) SAB (KHD, LHD); 26 Jul (1) EBF (CPN). Cattle Egret: 12 Jun (1 ad) Russellville, HBC (RLK); 12 Jul (1 ad) near Cumberland Mountain S.P., CUC (Margaret L. Mann). Black-crowned Night-Heron: 60 active nests on lower Fort Loudoun Lake, near Lenoir City, Loudon Co. (RC); up to 75 seen on upper CRL, including reports from the foray (fide RLK), but no information concerning the nesting site of these birds; no reports about other colonies in the region. Yellow-crowned Night-Heron: 12 Jun (5 active nests) Brainerd Levee, Chattanooga (C. Del Blum), "only known local site continues to expand" (KHD). White Ibis: 30 Jul (4 im) Ooltewah, HLC (KHD).

Scaup-Grouse: Lesser Scaup: 1 male spent its second summer on a pond in JNC (RLK). Black Vulture: found in 6 of 16 blocks on HKC-HWC foray (fide RLK). OSPREY: a good year for this species: at Watts Bar Lake, MEC, Rhea and Roane Counties, 17 nests produced 35 yg, while an inaccessible nest fledged an undetermined number of yg and 5 additional pairs attempted to nest; a pair attempted to nest on the Hiwassee Light at HRA (all fide Bruce F. Anderson); 3 yg fledged near Clinton, for the first ANC nesting record (CPN, et al.); 1 yg fledged at the Holston Army Ammunition Plant, HWC (unsuccessful attempt last year) (Tom Bowman, FJA), first nesting record in area. Sharp-shinned Hawk: a large number of reports: 6 May (1, agitated behavior) Honey Creek area of Big South Fork, SOC (CPN); 25 Jun (1) near Kyle's Ford, HKC (JCR); 27 Jun (1, carrying food) SAB (KHD, LHD); 9 Jul (1, carrying food) Stinking Creek, CPC (CPN); 9 Jul (2) HRA (RJH); 15 Jul (1) Signal Mt., HLC (RLP); 2 active nests in McMinn Co., and 1 yg found in S Bradley Co. by raccoon hunters (Paul G. Mascuch); nest near Speedwell, CIC (GWM). Cooper's Hawk: several reports: 12 Jun (1) JNC (Sally Goodin); 25 Jun (1) near Bull's Gap, HWC (FJA, Dee Eiklor); 9 Jul (pair with 4 yg) near Chuck Swan WMA, Union Co. (ARH, RDH); 23 Jul (1 im) Bluff City, SLC (BLC); 27 Jul (1) CRL, HBC side (RLK); nest near Speedwell, CIC (GWM); birds present all period at Amnicola Marsh, HLC, near 1987 nest site, but no nest found (James D. Rowell, Jr.). Red-shouldered Hawk: 25 Jun (ad with yg) Pressmen's Home Lake, HWC (BHS), a rare breeder in NE Tennessee. Ruffed Grouse: yg found in 4 blocks on HKC-HWC foray (fide RLK).

Coot-Tern: American Coot: 9 Jul (1) CHL (RJH). Greater Yellowlegs: 12 Jul

(1) SAB (KHD, LHD), ers. Solitary Sandpiper: 14 Jul (1) KSP (Marc W. Armstrong), ers; 26 Jul (9) EBF (CPN), max. Spotted Sandpiper: 26 Jun (1) Limestone, WGC (RLK), ers. Least Sandpiper: 17 Jul (1) St. John's Pond, WGC (RLK), ers. Pectoral Sandpiper: 24 Jul (3) KSP (KHD, LHD), ers. Stilt Sandpiper: 26 Jul (1) EBF (CPN), only report. American Avocet: 13 Jul (1) EBF (BAF). American Woodcock: 6 Jun (1) Bon Air, WHC (BHS), only report. Ring-billed Gull: 11 Jun (2) CHL (KHD, LHD, et al.); 1/24–30 Jul (2/1) KSP (BAF/KHD, LHD, ARH); unusual in summer. Common Tern: 12 Jun (1) CRL (RLK); 24 Jul (2) KSP (KHD, LHD). Forster's Tern: 24 Jul (1) KSP (KHD, LHD).

Cuckoo-Shrike: BLACK-BILLED CUCKOO: 24, 30 Jun (1 seen and heard) Graysburg Knob, GNC (BLC, GWS), rare in summer. Common Barn-Owl: 15 Jun (ad with 3–4 im) Veteran's Administration campus, JNC (FJA, RLK), newly discovered nest site. Whip-poor-will and Chuck-will's-widow: found in 4 blocks each on HKC-HWC foray (fide RLK). Red-headed Woodpecker: a nest with yg in CPC (CPN); also reported from CUC, FTC, HBC and WGC. Willow Flycatcher: reported from HRA, MEC portion (Johnny T. Parks, Albert M. Jenkins); KSP (BAF); Clarkrange, FTC (new site, 2 males—SJS); near Jacksboro, CPC (new site, 3 males, nest with yg—CPN); OND (new site—CPN); HKC (new site, nest under construction—JCR); AUS and Limestone, WGC (RLK); plus "several other reports from previously reported locations" (CPN). LEAST FLYCATCHER: 12 Jun (1 singing male) near MTR at 300 m elevation (BHS). BANK SWALLOW: 25 Jun (180+ birds, including im, plus 25 nest holes in ash bank) John Sevier Steam Plant, HWC (RLK); FJA has seen birds in this area for several years, but found no nests. Cliff Swallow: colonies (some up to 200+ nests) under 6 bridges at CRL (CPN, RLK); colonies (30+ nests each) under 2 bridges at Boone Lake, SLC/WGC (RLK); 5+ nests under new bridge at AUS (RLK, BLC, FJA). House Wren: reported from Hixson, HLC; Cleveland, Bradley Co.; Jamestown, FTC; OND; CPC; Maryville, BLC; Knoxville; HKC; Rogersville, HWC; Greeneville, GNC; Jonesborough, WGC; and JNC; mostly in urban/suburban settings. CEDAR WAXWING: "Many more nesting reports than normal, some attributable to increased atlas coverage, but also several reports from areas previously well-worked" (CPN); nesting evidence from ANC, BLC, CPC, CUC, FTC, GNC, HLC, HKC, HWC, E. Putnam Co., SOC, Sevier Co., SLC and WGC. Loggerhead Shrike: reported from 2 sites in Knox Co., 2 in BLC, and 1 in Loudon Co. (ARH, RDH, RC); also in 3 blocks on HKC-HWC foray (fide RLK); and at 4 sites in WGC (BLC, GWS, MD, RLK).

Vireo-Siskin: Solitary Vireo: 3 Jun (1) Virgin Falls, WHC (SJS, BHS, Caroll and David Viera); 12 Jun (2) near MTR (BHS); unusual in these parts of Plateau; also found in 1 block in HKC (CPN). Yellow-throated Vireo: found in 10 of 16 blocks on HKC-HWC foray (fide RLK). Warbling Vireo: 26 Jun (1) HKC (ARH, RDH), very scarce in E Tennessee. Golden-winged Warbler: 7 Jun (1) Isoline, CUC (BHS); 14 Jun (ad carrying food) DeRossett, WHC (BHS). Chestnut-sided Warbler: 1 Jun (1) Pickett S.P., Pickett Co. (Robbie and David Hassler), unusual outside of higher mountainous part of Plateau, but possibly a late migrant. Black-throated Green Warbler: 3 Jun (10, including 1 yg) near Virgin Falls, WHC (SJS, BHS, Caroll and David Viera); 12 Jun (5) near MTR (BHS); 16 Jun (7) Scott Pinnacle, WHC (BHS). Prothonotary Warbler: absent from usual AUS site (RLK). Swainson's Warbler: 24 Jun (3) Big South Fork at Pine Creek, SOC (CPN); 26 Jun (1) HKC (ARH, RDH); 1 on territory at Stinking Creek, CPC (CPN). Canada Warbler: territorial bird on Cross Mt., CPC (CPN, ABS), first breeding season report from county. Rose-breasted Grosbeak: 26 June (1 male, did not appear

territorial) Newman Ridge, HKC (CPN); nest on Cross Mt., CPC (ABS, CPN). Blue Grosbeak: found in 13 of 16 blocks (12+ in 1 block) on HKC-HWC foray (fide RLK); common in WGC (RLK). Dickcissel: 21 May (2) Daus, Sequatchie Co. (RLP); 6 Jun (1) DeRossett, WHC (BHS), not found on later visits; 24–26 Jun (5 males in 3 blocks) HKC-HWC foray (RLK, FJA, SJS); 27 Jul (1) CRL, HBC side (RLK). LARK SPARROW: 27 Jul (1 singing male) CRL, HBC side (RLK). SAVANNAH SPARROW: 2 Jul (1) NW Cocke Co. (JAK), not seen on later visits, about 4th summer record in state. Grasshopper Sparrow: several reports from BLC, CPC, CIC, CUC, FTC, GNC, Jefferson Co., Knox Co., SE Overton Co., SOC, SLC, WGC, and HKC-HWC foray (10 of 16 blocks, 22 singing males in 1 block—fide RLK). Northern Oriole: 21 Jun (ad with yg) Bon Air, WHC (SJS); 25–26 Jun (ad at 1 site and pair with yg at another site) HKC (ARH, RDH). House Finch: 19 Jun (pair building nest near used nest) OND (CPN); 26 Jun (pair) Rogersville, HWC (RLK); other reports were from established locations. Pine Siskin: 2 Jun (1) Signal Mt., HLC (Jonnie Sue Lyons), late lingerer.

Locations: ANC–Anderson Co.; AUS—Austin Springs, Washington Co.; BLC—Blount Co.; CHL—Chickamauga Lake, Hamilton Co.; CIC—Claiborne Co.; CPC—Campbell Co.; CRL—Cherokee Lake, Hamblen and Hawkins Cos.; CUC—Cumberland Co.; EBF—Eagle Bend Fish Hatchery, Anderson Co.; FTC—Fentress Co.; GNC—Greene Co.; HBC—Hamblen Co.; HKC—Hancock Co.; HLC—Hamilton Co.; HRA—Hiwassee River Area, primarily Meigs Co., but also Bradley, McMinn and Rhea Cos.; HWC—Hawkins Co.; JNC—Johnson City; KSP—Kingston Steam Plant, Roane Co.; MEC—Meigs Co.; MTR—Monterey, Putnam Co.; OND—Oneida, Scott Co.; SAB—Savannah Bay, Hamilton Co.; SLC—Sullivan Co.; SOC—Scott Co.; WGC—Washington Co.; WHC—White Co.

Richard L. Knight, 804 North Hills Drive, Johnson City, TN 37604.

EASTERN MOUNTAIN REGION—The weather picture for the region this period was very hot and dry. High temperatures ranged from the high 80's into the low 90's during the entire period. June's rainfall total in Elizabethton was only 0.7 in., which is the lowest total ever recorded for the month of June since TVA began keeping records in 1939. July's rainfall was about 1 in. below the norm. The overall yearly deficit now stands at over 10 in. below average.

Young Purple Martins just out of the nest were the only heat related casualties which were reported; the loss from 3 colonies in the Elizabethton area was estimated at 10–15%.

The following observations include some out-of-the-ordinary sightings (but not really anything spectacular) by the few observers that did venture out in the field. Surely, there are more observations from within the Mountain Region than are being sent to this Compiler.

Heron-Flycatcher: Great Blue Heron: 2 Jul (2) WATL, and 12 Jul (6) RC (RLK, et al.). Yellow-crowned Night-Heron: entire period (3–4) WATR (GDE, GOW). Lesser Scaup: 3 Jun (1) WATR (FJA). BALD EAGLE: 16 Jun (3) Chota WMA, Monroe Co. (ABS). Sharp-shinned Hawk: 21 June (1) RM (RLK); 17 Jul (1) Laurel Lake, Blount Co. (JAK). Cooper's Hawk: 6 Jun (1) SDYV, and 21 Jun (1) RM (RLK); 30 Jul (1) Sullivan Co. (GDE). Ruffed Grouse: 15 Jun (1 ad with 3 yg) Little Pond Mt., Carter Co. (RLK). Northern Bobwhite: 21 Jun (2 calling) Round Bald, RM, elevation 1830 m (RLK). Wild Turkey: 29 Jun (1 pair with 6 yg) Cross Mt., JHC (RLK). Northern Saw-whet Owl: 1 Jul (1 calling) GSMNP (CPN).

Solitary Sandpiper: 12 Jul (1) RC (RLK). Spotted Sandpiper: 12 Jul (6) RC (RLK). Caspian Tern: 8 Jun (3) WATL (FJA), late. Chuck-will's-widow: entire period (1–2) Milligan College, Carter Co. (FJA). Black-billed Cuckoo: 11 Jun (1) Chilhowee Mt., Sevier Co. (Susan Hoyle). Willow Flycatcher: 2 Jun (1) SDYV, JHC, and 8 Jun (1) Butler, JHC (RLK). Alder Flycatcher: 17–24 Jun (8 singing males and 1 nest with 4 eggs) RM, above 1,525 m elevation (Brenda Hull, et al.). OLIVE-SIDED FLYCATCHER: 10 Jun (1) Citico Creek, Monroe Co. (BHS). Least Flycatcher: 2 Jun (1) Cross Mt., JHC, and 27 Jun (1 ad feeding 2 yg) RM (RLK).

Swallow-Vireo: Tree Swallow: pair reported last period present at Butler, JHC, nest site through mid-Jun (RLK, et al.). Common Raven: 2 Jun (2 ad with 2 large yg) Cross Mt., JHC (RLK, et al.); 20, 29 Jun (1) Iron Mt., JHC, and 21, 27 Jun (1) RM (RLK, et al.). Red-breasted Nuthatch: 3+ present on Little Pond Mt., JHC, and 6+ present on RM entire period (RLK, FJA). BEWICK'S WREN: 7 Jun (1) Cherokee Nat'l Forest, Monroe Co. (BHS). Winter Wren: 6 Jun (1) McQueen Knob, JHC, at elevation of 1,065 m (RLK); 10+ present on RM all period (RLK, FJA). Brown Creeper: 7 Jul (1) Cherokee Nat'l Forest, Monroe Co. (BHS). Golden-crowned Kinglet: 20, 29 Jun (pair, at 850 m elevation) SDYV, and 15+ present on RM all period (RLK, FJA). RUBY-CROWNED KINGLET: 21 Jun (1 singing male) RM (RLK), could not be found on 27 Jun despite extensive search. Cedar Waxwing: common throughout period; 6 Jun (nest with 5 eggs) SDYV (RLK); 8 Jun (nest) WIBL (FJA). Warbling Vireo: at least 2 pair along WATR near Eliz throughout period (GDE, GOW).

Warbler-Crossbill: Golden-winged Warbler: 3–5 pair all period in RMSP (FJA). MAGNOLIA WARBLER: 21 Jun (1 singing male) RM, above 1,830 m elevation (RLK), could not be found after extensive search on 27 Jun. BLACKBURNIAN WARLBER: month of Jun (1 pair) McQueen Knob, JHC, 1,100 m elevation (RLK). Pine Warbler: 1 Jun (1) Little Pond Mt., JHC (RLK); 8 Jun (2) WIBL (FJA). Swainson's Warbler: 9 Jun (3) Citico Creek, Monroe Co. (BHS); 10 Jun (1) SDYV (RLK). Canada Warbler: fairly common all period on RM, Cross Mt. and McQueen Knob (RLK, et al.). Rose-breasted Grosbeak: all period on RM, McQueen Knob and Little Pond Mt. (JHC) and Unaka Mt. (Unicoi Co.) (RLK, FJA). DICKCISSEL: 11 Jun (1 singing male) Siam Valley, Carter Co., near Eliz. (FJA). Vesper Sparrow: 20, 29 Jun (1–2) SDYV (RLK). Red Crossbill: 27 Jun (25) RM (FJA); 10 Jul (30) Newfound Gap, GSMNP (ABS).

Locations: Eliz—Elizabethton area; GSMNP—Great Smoky Mountains National Park; JHC—Johnson Co.; RC—Roans Creek, Johnson Co.; RM—Roan Mt., Carter Co.; RMSP—Roan Mt. S.P., Carter Co.; SDYV—Shady Valley, Johnson Co.; WATL—Watauga Lake, Carter Co.; WATR—Watauga River, Carter Co.; WIBL—Wilbur Lake, Carter Co.

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FJA—Fred J. Alsop, III
DPB—Diane P. Bean
DWB—Donald W. Blunk
CHB—Carolyn H. Bullock
WGC—William G. Chriswell
RC—Richard Clark
BBC—Ben B. Coffey, Jr.
LC—Lula C. Coffey
BLC—Brian L. Cross
MD—Martha Dillenbeck
KHD—Kenneth H. Dubke
LHD—Lillian H. Dubke
GDE—Glen D. Eller
BAF—Barry Fleming
RPF—Robert P. Ford
JBG—Joe B. Guinn
RJH—R. John Henderson
ARH—Audrey R. Hoff
RDH—Ron D. Hoff
RLK—Richard L. Knight
JAK—Jon A. Koella
GWM—George W. McKinney
CPN—Charles P. Nicholson
RLP—Robert L. Pierce
VBR—Virginia B. Reynolds
JCR—John C. Robinson
ABS—A. Boyd Sharp
DJS—Damien J. Simbeck
BHS—Barbara H. Stedman
SJS—Stephen J. Stedman
GWS—Glen W. Swofford
MGW—Martha G. Waldron
GOW—Gary O. Wallace
JRW—Jeff R. Wilson

Observers are requested to use the following schedule when submitting records for publication in *The Migrant*:

Season		Date reports due to compiler
Spring	1 March–31 May	12 June
Summer	1 June–31 July	12 August
Fall	1 August–30 November	12 December
Winter	1 December–28 February	12 March

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